THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLVI. SATURDAY, FEBRUARY 21, 1885. No. 8.

ORIGINAL LECTURES.

VERSIONS AND FLEXIONS OF THE UNIMPREGNATED UTERUS.

A Course of Lectures delivered before the Boerhaavian Society.

BY ELY VAN DE WARKER, M.D.,

OF SYRACUSE, N. Y.; FELLOW OF THE AMERICAN GYNECOLOGICAL SOCIETY.

LECTURE VII.

THE INTRAUTERINE STEM.

TWELVE or thirteen years ago, when I first took up the subject of the intrauterine stem in a practical way, I quickly found that there was no subject in the whole range of gynecology that would so lay its advocates open to distrust. The teachers and leaders of opinion in America, without an exception, condemned in no moderate terms both the practice and the men who were reckless enough to employ it. Had any of the patients whom I treated with the intrauterine stem met with a fatal accident while wearing the instrument, I do not know of but two or three prominent members of the profession who would have testified that the treatment was legitimate.

The majority of the enemies of this method were men who had never used the intrauterine stem, and had based their opinion upon the experience of others, or had had an unfavorable result in one or two cases. Against this opposition it was useless to bring either arguments or evidence. It was equally useless to contend that the successful use of this instrument implied a distinct gynecological operation, with well-defined rules for the selection of subjects, with indispensable methods of preparation, and, lastly, the use of an instrument that conformed to a few fixed laws of pelvic mechanism.

Opposition has never obliterated the idea; that has remained, and gradually brought over converts to the treatment. It will be interesting to trace briefly the history of this method. From it we shall learn two lessons: first, that a germ of truth in an idea is worth more to human progress than the factional opposition of legions; and, secondly, that the use of the intrauterine stem has been the means of giving stability to many theories of intrauterine treatment.

That this treatment should meet with opposition; that it should have its periods of abandonment and revival, is but the fate of every radical method. In one respect the history of this instrument is anomalous. Its popularity seems to be sectional; and in America it has been, in a measure, crowded out by a surgical operation not unattended with danger, and one that is in no sense a cure of flexions of the uterus.

The report of the Commission to the French Academy of Sciences is the one event in the history of the intrauterine stem to which it owes its ill-repute.

In the light of the quarter of a century which has passed, I believe that that expression of opinion has no longer any value, and that we have ample evidence for a reversal of the verdict.

In order to understand the value that belongs to the formally expressed judgment of the French Academy, it will be necessary to review briefly the grounds upon which that judgment was based. We may see in this two factors: first, the instruments then in use as intrauterine supports; and, secondly, the men who passed judgment upon them.

Such was the character of the debate before the French Academy, that I cannot resist the conclusion that there was a man as well as an instrument on trial; the first upon a question of veracity, the second upon its merits.

Under the circumstances, it is nearly impossible that the participants in the discussion should not have confounded the man with the instrument. It is well known that in 1851 Valleix, stimulated by the report of Simpson in the *Dublin Journal* of May, 1848, made trial of a modification of Simpson's instrument, and published his results in 1851. That two years later, in 1853, in a more elaborate paper, he gave the method of the introduction of his "rédresseur utérine," and the exact indications for its use, concluding with the statement that in 117 cases so treated, 78 were completely cured; in 14 the treatment was wholly favorable; and in the remaining cases there was but slight improvement.

The unpleasant results which Valleix experienced were slight metritis, for which he employed bloodletting and morphia, hemorrhage, which abated of itself, hysterical accidents and febrile symptoms, which were, he said, without significance. That such results were reached in five years in a field entirely new and full of interest, naturally drew upon the author the attention of all gynecologists, and raised in some minds doubts of his veracity.

The effects of Valleix's enthusiasm was soon apparent. In less than a year the first note of alarm was sounded. Strange to say, it was neither Valleix nor his instrument which led to the fatal accident; but it was the result of what we would now regard as either gross ignorance or carelessness on the part of a celebrated man. On the 4th of February, 1854, Broca published the case of a woman who was admitted to the hospital under his care with symptoms of peritonitis; it was found that anteversion existed. From the 7th to the 11th of October inclusive the sound was daily introduced, and the organ restored to its normal position.

On the last day pain followed, and death occurred eleven days later. To us, this experiment of Broca calls to mind but one fact, which we all know: that in peritonitis we are not to sound the uterus, much less introduce an intrauterine stem. In 1854 this experiment and its results had a much broader significance. It seemed to establish the fact that the new method of intrauterine mechanical support was one full of danger to life. The heroism of Broca in publishing his case encouraged others.

It was discovered that Aran, Nélaton, and Cruveilhier

had likewise lost cases; not from an imprudent use of the sound, but of the rédresseur. From these cases resulted the appointment of Depaul, Huguier, and Robert as a commission, on the part of the Academy, to examine critically the merits of the rédresseur, the chief result of which was the report of Depaul. The character of this report we all know. It excited in the body of the Academy considerable mistrust of the validity of Valleix's results.

Depaul reported twenty-seven cases of Valleix, Gaussail, and Piachaud, which had been treated with nominally good results, but were afterward ascertained to have been followed by many bad results. P. Dubois related that he sought out many of the women who were discharged by Simpson and Valleix as cured, and found them still suffering from the displacement. On the formal expression of opinion by the Academy, it is needless to comment in full. It condemned all forms of intrauterine mechanical treatment, although there was evidence to condemn but one—the rédresseur of Valleix.

It may have expressed the opinion of the Academy as a body, but it did not express that of the members individually.

The majority of the Commission itself dissented from the sweeping report of Depaul. Huguier and Robert asked that the rédresseur be not unconditionally rejected. Hervey de Chigoin, Velpeau, Latour, and others opposed the opinion of the Academy. But dissent was without avail. It was an expression of a majority, the force of which existed in numbers, not in truth.

Instead of there being evidence before the Academy sufficient to condemn both the theoretical and practical employment of all forms of intrauterine mechanical support, there was proof of the dangers attending the use of a single, very imperfect instrument.

Valleix modelled his rédresseur after Simpson's intrauterine stem of 1848; yet, nearly alike as they were, they exist in history as two very different instruments. That of Simpson had a very worthy career; so far as actual danger of life was concerned, the most complete condemnation that it ever received was the fact that its inventor himself finally abandoned it.

The instrument of Valleix was made famous by a series of fatal accidents. The inventor was evidently in doubt as to what was really necessary to the proper intrauterine support of the organ. He first made them of six, then of five, then of four centimetres in length, and finally just as short as possible. While he was thus shortening the stem, he was overlooking a serious mechanical defect. Upon the stem of Simpson there is a flange which supports the external os; Valleix supported the uterus by an inflatable ring pessary distinct from the stem, omitting the flange, and thus allowing the uterine fundus to rest upon the end of the instrument so as to be irritated or seriously injured. However short he made the intrauterine part, or changed the curve of the external support, it was in danger of penetrating too far. Thus, to the sound of Broca, and the unfortunate rédresseur of Valleix, we owe the unfavorable verdict of the French Academy.

At Vienna and Berlin, at nearly the same time, opposition was not less marked, or debate less heated; but approval and disapproval were individual expressions of opinion. There was no effort to create an *index expurgatorius*, after the manner of the French Academy, or to make a theatrical proclamation of proscription as an official act. Unscientific as this proceeding was, however, the effect was quite a general abandonment of this mode of treatment.

Fifteen years passed before the reaction set in, an interval marked here and there by a paper in the periodical press, from the pen of some one who was cautiously working at the problem. The debate in 1868 in the London Obstetrical Society signalized the period of revival. An animated discussion in the Association of Physicians and Naturalists, at Dresden, in the same year, indicated that this revived interest was widespread. This brings us to the second period in the history of the intrauterine stem, which was characterized, not so much by the invention of any decidedly new form of mechanical appliance, as by a total abandonment of the stem with external support.

It having been shown that the decision of the French Academy was based upon this abandoned form of instrument, and included all forms of intrauterine support; not by direct evidence, but by hasty theoretical inference, it follows that, if like unfavorable facts cannot be brought against properly constructed instruments of the second period—those with intravaginal support—the decision of the Academy must be reversed, and the proper use of intrauterine pessaries be given a legitimate place in gynecic surgery, unhampered by timidity or doubt.

The earliest record we have of death from a stem without extravaginal support is referred to by Amussat about 1828. So far as I am able to find out, the report of a fatal result from the use of the "petite tigi droite en ivoire," by Amussat, comes to us at third hands. Raciborski refers to a thesis by Dr. Quetier (1828), and states that Amussat found the dangers of this treatment confirmed. Tilt states that the case terminated fatally, and assigns the date to a year earlier than the thesis of Quetier, but gives no reference.

Now it is not a little singular that Raciborski does not refer to a fatal case under the care of Amussat, and that it should have escaped the careful research of Winckel, who was obliged to refer to the unsustained authority of Tilt in the matter of this case, adding the comment that this statement does not wholly agree with that of Quetier: "Dass dieses Verfahren mehrere Male geglückt sei."

The statement of Tilt that fourteen fatal cases are known to have occurred in France, America, England, and Scotland, is frequently referred to by the opponents of the intrauterine stem. I do not wish to impugn the veracity of Dr. Tilt, but it is not usual to make statements of such vast importance as this in so summary a manner in other departments of science. No American author of a treatise upon gynecology that I have ever seen makes any allusion to a fatal case in America. Hodge, who ought to know of a fatal case, as late as 1868, says: "In America we have seen no favorable report of any importance. The writer has heard of its employment in some cases, but with no permanent advantage."

At this period in the history of the intrauterine stem, the centre of activity was transferred to England. In 1864 Dr. Greenhalgh exhibited his intrauterine instrument. In 1865 Dr. Aveling exhibited an intrauterine

spring pessary, which he called a spring tent. The next year was remarkable for the number of new instruments offered to the profession. Dr. Aveling presented to the Obstetrical Society the intrauterine stem of Dr. Graham Wier, belonging to the diverticulating class. Dr. H. G. Wright published the description of his instrument belonging to the same class as the above. The instrument of Dr. Meadows was also presented at the same time. While Dr. Aveling concluded the progress of the year in the mechanism of gynecic surgery by bringing to the notice of the profession a flexible stem of coiled wire, which, as late as 1873, he suggested might be united with the flexible rubber stem of Dr. Squarey. In 1869 the instrument of Dr. Routh was brought forward; that of Dr. James Young, of Edinburgh, in 1870; that of Dr. W. S. Playfair in 1871; that of Dr. Wynn Williams in 1872; that of Dr. Thomas Chambers in 1873; those of Mr. Lawson Tait and Dr. Squarey in the same year. On Wednesday, December 3, 1873, occurred a remarkable event in the history of the intrauterine stem. On that day, Dr. G. C. P. Murray, Dr. A. Wynn Williams, and Dr. T. Chambers each presented to the London Obstetrical Society a new form of the instrument. Dr. W. Ross Jordan presented to the Society a new form of intrauterine stem in 1874; Dr. Eklund, of Stockholm, Dr. Amann, of Munich, Drs. Clement Godson, G. Granville Bantock, and James Young, of England, each offered an instrument to the profession in 1874.

In 1860 Dr. Edward Martin improved Simpson's second form of instrument. C. Braun used advantageously a hard-rubber stem of his own invention (1864). Olshausen devised a new form (1867). In the same year Hildebrandt introduced an intrauterine stem made of lead. Dr. H. Beigel, in 1873, and Dr. Dühring, in 1874, each described new forms of the instrument.

In the United States, Dr. Peasley claimed advantages for two instruments of his devising (1866). Such inventive activity is only equalled in the history of one other instrument in the literature of gynecology—the obstetric forceps; and no other instrument, not even excepting the last named, can show a more brilliant array of careful, conscientious inventors and observers.

While the principle of construction of these instruments had changed in this second period, so also had the character of the opposition to their employment. The occurrence of no fatal case from their use any longer gave opportunity for the most potent of all arguments against them.

The mind of the profession was thus prepared to examine more carefully into the merits and demerits of this plan of treatment, and to understand both the proper construction of the instruments and the limits of their use.

I have but one other item to add to the history of the intrauterine stem. It transfers the interest to American gynecology, and to my mind gives additional lustre to a famous name. I received the following letter from Dr. Sims, which I transcribe entire, except a brief paragraph which relates exclusively to a personal matter of his own:

12 PLACE VENDOME, PARIS, Feb. 12, 1879.

MY DEAR DOCTOR: I am just now writing my chapter on displacements of the uterus, and in looking over authority at my command, I do not find your early papers on flexions. I have only your "Present Status of the Intrauterine Stem," etc., in the second volume of the *American Gynecological Transactions*. May I beg you to send me what you see I need, to do you and the subject full justice? I will return the documents if you have no duplicates. From awkward and badly conducted experiments in the early days of my experience, I was unfortunate with the stem, and I gave it up entirely; but I have now come round to your way of thinking, and I see and understand why I failed in my early experiments. Thanking you in advance, my dear Dr. Van de Warker, believe me, yours, very truly,

J. MARION SIMS.

The pleasure this letter gave me is now tempered with a sad regret, which you will all share with me, that Dr. Sims did not live to complete the work upon which he was engaged, and which, had it been completed, would have placed the intrauterine treatment of flexions upon a secure and scientific basis.

If one contemplates the treatment of a case of uterine flexion by the stem, one question must first be answered: Is it a suitable case? There are many pelvic conditions that forbid the use of the instrument. One condition is very common, and is more frequently associated with flexions than with other uterine displacements. This is pelvic inflammation—pelvic peritonitis and cellulitis. For our purpose it is not necessary to make any distinction between them; they are one disease. Speaking generally, they contra-indicate nearly all uterine manipulative treatment; but, so far as the endometrium is concerned with this surrounding condition, it is forbidden ground. The same rule applies to the stem as well as intrauterine medication, or the introduction of the sound. The acute stage no one is liable to mistake; but in the chronic state, in which we have to contend with its products in the form of pelvic indurations and adhesions, the contra-indications are not always so clear. It needs at times a very careful touch to establish the fact of uterine adhesion, especially when elongated, as Winckel shows beautifully in the illustrations to his *Pathologie der Weiblichen Sexuel-Organe*.

When we have to do with the non-suppurative products of inflammation, we must remember that we are dealing with a state not many removes from that condition itself. Therefore, so long as adhesions persist, we are in constant danger of a relapse, and nothing will do this so surely as uterine manipulation, especially that directed to the cavity of the organ. If I were to draw the line between the amateur and expert gynecologist, I should say that the former finds his methods attended with frequent complications, either primary or secondary, of pelvic inflammation, while the latter never has them. If, then, you find that the introduction of an intrauterine stem is followed by cellulitis, accuse yourself, or the form of the instrument, not the principle. You have mistaken your case, or failed in your manipulative tact.

Another class of women whom it is very difficult to treat with the intrauterine stem is the anæmic neurotic; and yet no class demands thorough treatment more urgently. Their pelvic organs are the seat of such active subjective symptoms, and the mental impressions will shift so quickly, that it will be difficult, if not impossible, to convince the woman that the presence of the instrument is not the cause of the pelvic distress.

If a patient of this character should have a friendly interview with a physician, and if, with the delicacy and kind regard for the reputation of a medical *confrère*, which is a leading trait of the profession, he were to inform her that the wearing of an intrauterine stem frequently proves fatal, you would find her at once to suffer such agony of mind and fear of death that you would have no alternative except removal of the instrument. Days, and it might be weeks after, would be spent in reëducating her, so that the instrument could be borne with mental comfort. I mention this because I have had the experience, and to make clear to you that we have a mind as well as a flexed uterus to deal with.

In these anæmic cases we meet with instances of great hyperæsthesia of the pelvic organs. If present in intense form, it would amount to a contra-indication. Usually this condition may be treated in connection with the preparatory measures to be shortly described. Pelvic tumors of any form would forbid the employment of the stem. Lacerations of the cervix would require to be repaired before the use of the pessary; and lacerations of the perineum, if extensive, might interfere with the action of the vaginal retaining part to such an extent as to make it very difficult to keep the stem in place.

Some cases of flexions are attended with frequent, prolonged, and profuse menstruation, which ought to be treated before the use of the stem. Such a state may be the direct outcome of the flexion, due to a strangulation of the uterine wall, and for which the stem would be efficient treatment. Speaking generally, however, my first statement would be the safer one to follow.

Now, having a proper case to treat with the intrauterine stem, I always begin with preparatory treatment. This consists in the use of the uterine probe, or sound. I call it training the uterus, and by it I expect to establish a tolerance of a foreign body in the cavity. I first wisely adapt the curve of the sound to the uterine cavity, and then gently introduce it, making no effort to straighten or replace the uterus. The introduction, even when very gently accomplished, is sometimes attended with pain. I leave the sound in place for from five to ten minutes, and the pain usually subsides; if not, I remove it, and the next day, or the day after, I repeat the operation, and do so until I find that the pressure of the sound no longer excites any pain. When this result is reached, I regard my patient ready for the use of the stem. This training of the uterine cavity is a measure closely related to like manipulations in other departments of surgery. The laryngologist so trains the fauces to bear the pressure of the mirror, and the genito-urinary surgeon will in like manner relieve the hypersensitive urethra. I have good authority for carrying the analogy still further. Paul Dubois contends that the stem pessary relieves by modifying the abnormal sensitiveness of the uterine cavity, just as a sound cures neuralgia of the neck of the bladder; while Malgaigne cites the case of a woman who was suddenly relieved of pain by the stem, the flexion being uncured. To those who have had considerable experience of the intrauterine stem, these cases are not unusual.

In some cases, by no means rare, it is not necessary to train the cavity, as the organ exhibits no intolerance of the instrument. The state of primary tolerance is usually found in long-standing cases of acquired flexions. The developmental flexion in young and nervous women requires the most careful preparatory treatment. This employment of the sound or probe serves another very useful purpose, It is very sure to correct any error you may have made in regard to pelvic conditions unfavorable to the use of the stem. Other complicating conditions attending the flexion may be treated on the principles already laid down. Since the publication of Dr. Mundé's paper on lymphadenitis, in the *American Journal of Obstetrics*, I have been able to recognize several cases of acute adenitis in the parametrium in connection with flexions of the organ. I am strongly of the opinion that this complication ought to be treated before the introduction of the stem. It would occupy too much space to enter upon the details of diagnosis and treatment of this complication here, for which object I take pleasure in referring you to Dr. Mundé's very able paper.

Conceiving our case to be a proper one for the employment of the stem, and the patient also in proper condition, it is now necessary to say something about the instrument itself. Of course, I have had my own model with which I have worked successfully for years, but in all I have written upon this subject, I have not said so much upon my own or any particular form of the stem as I have upon the correct principles of construction of the instrument. If a physician who is fairly familiar with pelvic manipulations has a correct idea of the theory of the stem, he may be trusted to employ it with safety and advantage.

An intrauterine stem must be made with reference to a few principles which I believe to be unalterable. First, the stem must be shorter than the cavity of the uterus, and so small in diameter that neither the outer nor inner os is stretched or occluded. Secondly, it must be supported wholly from within the vagina. Thirdly, the retaining part must be of such a size that it will not interfere with the action of the bladder or rectum, or with the comfort of the patient, and lastly, the retaining part must be of such a form and so adjusted to the vagina that it will not restrict the normal uterine mobility. In order to comply with the latter condition, we cannot limit ourselves to any one form of the retaining part. It is sometimes a difficult problem to solve so to adjust the retaining part to the vagina, that the stem is held securely in place while the uterus is not fixed immovably within the pelvis. The expulsive power of the uterus is, in some cases, considerable, and this power is usually exerted during menstration, when you are most anxious to keep the instrument in place. I have never yet failed to accomplish this, but in doing so I have invented quite a variety of vaginal attachments. In some cases it is better to readjust the instrument when it becomes displaced than to make the retaining part too secure, as in the latter the freedom of movement of the uterus may be too much restrained.

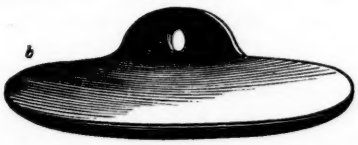
Anteflexion, like all forward displacements of the uterus, is the most difficult to replace and retain comfortably in position. The vaginal part differs materially from that of the retroflexion form. The idea was borrowed from Amann, but in his form of the instrument the vaginal attachment was rigidly attached to the stem, and the instrument was made to act in both forms of flexions by wedging cotton behind the vaginal flange in anteflexion, and before it in retroflexion. In

my modification the flange impinges against the posterior vaginal wall, and serves to correct excessive version. Fig. 1 shows the ordinary form of the anteflexion flange.

FIG. 1.

In Fig. 2 we have the same form modified so as to meet the difficulties offered by a short and very capacious vagina.

FIG. 2.



The scant dimensions of the vagina of the virgin required a further change in form, which is shown in Fig. 3. These cuts are taken from flanges that have

FIG. 3.

been used, and were invented specially for each case. I have said that this idea was borrowed from Amann; I ought to have said, however, that I had devised the anteflexion flange before I had seen his book, *Zur Mechanischen Behandlung d. Versionem u. Flexionen d. Uterus*, and that his published account antedates my own.

The retroflexion flange is a simple button-like attachment (Fig. 5). It is passed over the end, *a*, of the stem (Fig. 4) by means of a wire passed into the end of the stem. This attachment is also made of various

FIG. 4.

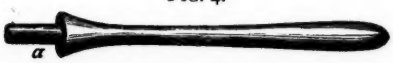


FIG. 5.

sizes to meet special difficulties. Tiemann & Co. make them for me, different in some respects from the one figured, which is solid except the central opening at *a*; the later form has large fenestra cut out of the solid portion, which gives the flange superior retaining power over the solid form, and affords ready exit to the secretions of the cervix. This form generally converts a retroflexion into a retroversion, but after years of work with this instrument, I have come to the conclusion that this is better than further to complicate the instrument by attachments to correct the resulting version. This can be better done after three or four months, when it is no longer necessary to wear the stem, by an ordinary pessary with the proper curve. In these cases we must not attempt too much, but be satisfied with making progress slowly. Patience and gentleness of manipulation must be cultivated as an art by the physician who aspires to treat uterine flexions successfully. I have on very few occasions used a flange larger than the one shown in Fig. 5. It will happen now and then that the flange and stem will get displaced. The remedy is a very simple one—replace them, remembering that if a stem is so securely held in place by the vaginal attachment that it cannot become displaced, it is probably too good a "fit," and the patient cannot wear it.

The introduction is a simple matter. The cervix is exposed by the Sims's speculum, and held gently but firmly by a volsella forceps. The stem is placed upon a wire and is passed into the uterine cavity in the same manner as a sound. The flange is slid over the wire as a guide and carried up to the stem, and by a little manipulation passed upon the stem until it fits firmly against the shoulder of the stem, at *a*, Fig. 4. At times, difficulty is met in passing the flexed point of the uterine canal. In this case a sound with a proper curve is first introduced, and the uterus straightened and held in that position for a minute or two, and then as the sound is withdrawn pass in the stem, before the uterus can recoil into its flexed form. If the stem should not freely enter the uterus, use the sound a second time, and again try and pass the obstruction with the stem. Remember that at no time is force to be used; if you were to lose your patience and the woman become tired, stop and try again some other day, rather than attempt to force the stem through the obstruction. I have never yet been obliged to resort to an anæsthetic in the manipulation I have just described; on the contrary I prefer to leave the patient alert to every sensation, and guide myself accordingly. If there is any pain after the introduction of the instrument, keep the patient warm in bed until it abates. At one time, I introduced the stem at my office, which I rarely do now; in fact, I do not believe that any form of intrauterine treatment is proper office work. I make a rule to do this at the patient's home, or in my private sanitarium.

Vaginal irrigation should be carefully carried out during the time the patient is wearing the stem. Constipation should be prevented, as difficult defecation is a frequent cause of displacement of the instrument. When the stem is nicely adjusted and is well borne, I allow it to be retained for two or three months. I then remove it and observe the case through a menstrual period in order to form an idea of the extent to which the patient has been benefited. If necessary, the stem is replaced, or a version pessary is substituted for it.

You cannot impress too strongly upon the mind of the patient, the need of regular visits at the office while the stem is in position; and, also, that it must be removed at a certain time. Notwithstanding all this caution, they will occasionally keep away, and wear the

instrument for many months. One of my cases retained the stem for over a year; purposely, however, as it gave her great relief from a severe dysmenorrhœa. Another precaution that I have observed in recent years, I feel it a duty to impart to you: I never employ the stem in strange patients, but wait until such a degree of mutual respect and confidence is established that I feel sure that the patient will remain under my care, or the care of a friendly physician, during the whole period of stem treatment; otherwise she may leave you while wearing it, and pass into the hands of a hostile doctor, or, what is just as bad, a friendly one who has a great fear of the intrauterine stem, and who will take from his library shelves the text-books written by several of my friends, and demonstrate to the patient the great danger of the instrument and her own narrow escape.

It is no part of my plan in this lecture to bring forward arguments to prove that the intrauterine stem is harmless and a legitimate method of treating flexions. I hope that at some future time I may be able to analyze and tabulate all my cases of uterine flexions so treated, which give good ground for my own faith in the instrument within the limits and precautions I have always observed, and which I have always taught. I may briefly state what my experience in its use has been. It has often surprised me with what comfort the properly adjusted stem can be worn. Menstruation is often undisturbed, quite often, however, it is somewhat more free and lasts a little longer; and then, on the contrary, I have introduced it in cases attended with menorrhagia, and found the discharge to become normal in time and quantity. It is my rule, in common with all physicians I believe who use the stem, to instruct the patient not to indulge in sexual relations while wearing it, yet it illustrates with peculiar force how little functional disturbance the stem may excite when I mention that Olshausen, in an artitle on "Conception unter Ungewöhnlichen Verhältnissen," in the *Archiv f. Gynäkologie*, vol. ii. p. 280, mentions two cases in which pregnancy occurred while the stem was present. In one case, the stem and ovum occupied the uterine cavity together twenty-seven days, and in the second case twenty days. Dr. Goodell, in the debate on my paper on the instrument, read before the American Gynecological Society at Boston, in 1877, mentions a third case of pregnancy under the same conditions.

One other precaution I have always observed, and with which I shall conclude this long and, I fear, tedious course of lectures. Whenever I find that the stem creates pelvic pain which does not subside of itself, I promptly remove it, just as I would any other pessary under like circumstances.

ORIGINAL ARTICLES.

REPORT OF A CASE OF PELVIC ABSCESS, COMPLICATED WITH A SEPARATION OF THE SYMPHYSIS PUBIS.[1]

BY S. D. THRUSTON, M.D.,
OF DALLAS, TEXAS.

MRS. D., a healthy, plethoric, American woman, 40 years of age, and weighing 150 pounds, began labor about 6 P.M., December 5, 1882. Saw her at 7 P.M.; found nature doing her work well, and safely. The progress was exceedingly good, and at 11 P.M. delivered her of a healthy boy. In the next thirty minutes the placenta was delivered, followed by a sharp hemorrhage, which was easily controlled. Remained two hours, ordered 10 grs. quin. sulph. at 6 o'clock in the morning, and gave instructions to keep her perfectly quiet.

Dec. 6.—Patient bright and happy; uterus well contracted; lochia free and pure; no tenderness; passed urine freely. Ordered 10 grs. quin. sulph. at noon, and night, and next morning.

7th.—Bright and cheerful, but complained of soreness in lower part of abdomen. Tactile examination revealed no peritoneal or metritic tenderness. Lochia free, and void of odor. Temperature and pulse normal. Ordered quin. sulph. grs. 10 at noon, and night, and next morning.

8th.—Thoroughly cinchonized; bright, but still complained of soreness in lower part of abdomen. Temp. 99½°; pulse 86. Examined, as was thought, thoroughly, and still detected no signs of impending trouble. Was in the act of leaving, when she said: "Doctor, you have not touched the sore place yet." Returned to the bed, and asked her to place the hand on the offending spot, when, strange oversight, the symphysis was the "sore spot," and examination disclosed the fact of a separation of the bones, the inter-articular cartilage being softened. The two bones moved upon each other with a peculiar cluck when either half of the pelvis was elevated, and caused great pain. Made a bandage similar to the body of a pair of drawers, with eyelets and lacings reaching from the lower margin of the pubis to the umbilicus, and a perineal band to prevent riding. This, when firmly laced, brought the two bones in close approximation; and by partially controlling the hip-joints, fixed the pelvis to a great degree, thereby preventing the edges of the bones from slipping upon each other, and giving much relief. Ordered quin. sulph., as for the preceding day, with the addition of morph. sulph. gr. ¼ every six hours.

9th.—9 A.M., nervous, fretful, and suffering much pain, notwithstanding morph. sulph. gr. j in the past twenty-four hours. Temp. 101°; pulse 100. No milk. Lochia void of smell, and normal. The external tissues over the pubis, and extending toward the left, were much tumefied, and very tender; mucous membrane of vagina hot. Directly under the arch there were thickening and perceptible induration extending along the roof of pelvis to the left; micturition free, and painless. Bowels moved in the early morning unaided; action healthy and non-offensive. Ordered hot linseed meal poultice to cover the entire inflamed surface, and to reach up as high as the umbilicus, the bandage to be laced over it. Hot water douche per vaginam, for fifteen minutes at a sitting, to be repeated every four hours. Quin. sulph. as on the preceding day, and morph. sulph. gr. ¼ every four hours.

P.M., quiet, but very tender to the touch. Lochia normal. No tenderness of body of uterus. Temp. 101½°; pulse 108. Ordered same treatment continued through the night.

[1] Read before the Dallas County Medical Society, 1884.

10th.—General condition not materially changed; more external swelling reaching in the direction of left inguinal region; more induration in roof of pelvis; tissues in floor, and in direction of left broad ligament, healthy; no lateral tumefaction internally to correspond to the lateral external swelling. Temp. 100°; pulse 108. No milk. Micturition painful, and difficult. Treatment same as previous day.

11th.—General condition about same; no diminution of the inflammatory process; indeed, rather increasing. Temp. 100°; pulse 108. No milk. Unable to micturate. From this day the catheter was necessary twice daily. The bowels were very regular, moving about once in thirty-six hours without aid of any kind, and in spite of the large amount of morphia used. The same treatment was continued, except an increase in the daily quantity of morph. sulph. to 2 grains, and diminution in quin. sulph. to 20 grains. The cellulitis gradually developed into a circumscribed phlegmon, which, on the 20th of December, could be easily detected occupying the left half of the pelvis anteriorly, and involving the tissues in front of and between the neck of the bladder and os uteri, as well as the cellular tissue lining the roof.

The hot douches were discontinued, as the pipe seemed to produce more pain than the hot water gave relief. From this time to the 29th of December, the condition of the patient was grave. Daily temp. 100°; pulse 120. Poultices to the tumefied surface. Quin. sulph. 20 grs., and 2½ grs. morphia, every twenty-four hours, constituted the medication, together with the free use of brandy. Phlegmon increasing in size, and patient beginning to show signs of hectic. Thus matters were up to the 29th. Bandage was removed on the 23d.

29th.—Wishing for assistance, I was requested to ask my friend Dr. John Pace to see her. Found the left anterior half of the pelvic cavity, extending from the symphysis up the left groin, well filled with the tumefaction, which was not so tender to touch. No evidence of pus, now so anxiously sought. Temp. 100°; pulse 120. Same treatment in every respect continued.

Jan. 16, 1883.—Since the consultation with Dr. Pace, the case has run on in the same groove. Patient holding her own. No increase in size of swelling, which is evidently preparing to break down. Temp. 100°; pulse 120. Brandy has relieved the signs of hectic. To-day could detect slight and deep fluctuations near the os vaginæ, a little posterior to the left labia, and directly under the pubic arch.

17th.—With Dr. Pace, made another thorough examination, and found evidences of pus; but so deep, concluded to wait the more thorough breaking down of the mass, notwithstanding the critical condition of the patient

19th.—With the assistance of Dr. Pace, the patient having been put under the influence of ether, a free incision with the bistoury was made, at the line of junction of mucous membrane and the skin of the left labia, when the fluctuation indicated the pus to be nearest the surface. With a forcible jet, a large quantity of very offensive sanguineo-purulent matter discharged itself. So large was the amount, and the shock threatening life, it was deemed prudent to check the flow. The incision was closed with a tent and compress of carbolized cotton, and the patient allowed to rally, which, under the influence of brandy, took place promptly. She pronounced herself more comfortable than for a month, yet the size of the tumor externally was not reduced.

20th.—Removed dressing, no discharge following; cavity was washed out with a solution of iodino-carbolized water until it returned free from stain. Used simple dressing of compress of carbolized lint—no tent—with emollient poultices externally. Temp. 100°; pulse 100.

21st.—Same condition of affairs, except rather more cheerful and much improvement in general facial expression. Temp. 100°; pulse 106. Continued treatment as on previous day.

22d.—M., severe rigor for more than an hour; great vital prostration; expression anxious; respiration shallow and sighing. Pulse 160. Rallied thoroughly by 2 P.M., under the influence of local heat, with hypodermatic of brandy and morphia.

6 P.M., fever very high. Temp. 106°; pulse 140. No pain and very slight tenderness over the tumefied surface. Treatment general.

10 P.M., fever declining. Temp. 105°; pulse 130.

23d.—1 A.M., fever still declining. Temp. 103°; pulse 120. Bathed in profuse sweat; rubbed surface dry with a coarse towel and then well with pulverized dry mustard; gave $\frac{1}{60}$ of a grain of atropia hypodermatically.

3 A.M., much improvement; surface soft, moist, and pleasant; sleeping quietly. Temp. 101°; pulse 120.

9 A.M., removed compress, explored the abscess cavity with a No. 9 rubber catheter, which was followed by the free discharge of a full quart of laudable pus. No shock or prostration. Washed out cavity as before, and inserting a thin carbolized tent of lint for drainage, dressed over all with antiseptic cotton. Temp. 99.5°; pulse 105.

6 P.M., has done remarkably well all day. Temperature and pulse same as morning.

24th.—9 A.M., slept soundly all night and is much refreshed. Feels hungry; remarkably bright and cheerful. Removed dressing. Three or four ounces of healthy pus discharged; dressing in all respects the same. Temp. 99°; pulse 96.

6 P.M., quiet and comfortable all day, and for the first time in forty-six days the temperature and pulse are normal. Continued treatment.

25th.—9 A.M., convalescence absolutely commenced. Temperature and pulse normal; slight discharge, no external tumefaction, and no tenderness or induration per vaginam. The walls of the cavity in close proximity; difficult to use the wash in consequence; spirits buoyant. Reduced the medication to five grains of quinia sulph. with morphia sulph. one-half grain morning and evening.

26th.—Still improving. Abscess cavity very shallow and discharge slight. Steadily improved from this date on to final discharge. The medication was restricted now to quinia and iron. No morphia being required to procure sleep or quiet pain, I

thought best to cut it off at once, as the disposition to the habit was very pronounced.

Feb. 7.—9 A.M., made a thorough examination per vaginam and rectum, both tactile, and with the speculum. No malposition or tumefaction to be detected in or around the uterus or its connective tissues; symphysis firmly united, abscess walls united and healed up to, and including the external wound; eschar small and smooth; health established. Recovery perfect. Nothing has been said about the adjuvants to the medical treatment. The medication during the entire time was confined to morphia, quinia, and brandy pro re nata. Atropia was used once. No purgatives were indicated, as the bowels were absolutely regular and dejections healthy. Hot water, made antiseptic with iodine and carbolic acid, was used per vaginam, and poultices externally. The main adjuvant, diet, consisted of eggs, milk, mutton, and beef soup, well boiled game and fish, with every alternate morning a plate of oatmeal mush, well cooked. The nursing was of the best, and aided materially in bringing the case to a happy conclusion. There was at no time—nor has been since recovery—any mammary secretion, nor even the least attempt at such natural function. The symphysis was so firm at the end of the fifth week as to allow the removal of the bandage.

In passing, it will be interesting to know that in her first labor—this being her second—she gave a clear and positive history of separation of the symphysis—not followed by cellulitis,—on account of which she was unable to walk for six weeks after delivery.

In reviewing the literature of this subject, but one author—Trousseau—alludes to this accident as a cause from which pelvic cellulitis may spring, and he is vague and indefinite in his language.

There are two points of interest in the subject which gave rise to this report, viz.: The cause and character of the cellulitis and the point of evacuation. Of all the causes laid down, parturition is the most frequent, and the character of the same is so general, that English surgeons give it the name "pelvic cellulitis." The French consider all such inflammatory processes as complications simply of "periuterine cellulitis." Thomas and Emmet lean very decidedly to the French nomenclature, while all speak of it as diffused, almost denying any phlegmonous nature. Of all other causes, nothing is said about a separation of the symphysis. That the inflammatory process in this case began from this cause is proved by the tissues involved. That it followed the course of a phlegmonous inflammation is made positive by tactile examination and its close confinement to the tissues in which it began. Beginning in the areolar tissue in front of and between the neck of the bladder and uterus, it involved in its development those tissues only which lie adjacent to and line the left half of the roof of the pelvis; although extending well up into the left inguinal region, the tissues there were only affected by the pressure of the growing phlegmon, and did not become part and parcel of the same. That it did begin in the cellular tissue covering the symphysis is arrived at from the fact that it was the first point of tenderness, and for three or four days the pain and soreness were confined exclusively to those parts. Advancing laterally, it confined itself literally to the left anterior segment of the pelvis, never invading the cellular tissue of the broad ligament or dipping down so as to reach that around the rectum. This was proved daily by rectal examination, while at the same time there was perfect regularity in the function of that organ, unattended with difficulty or pain. During the entire time the catheter was required twice daily to empty the bladder. In the left groin externally it gave to the touch the sensation of a well-defined and circumscribed tumor, and not that of a general induration and tumefaction of the whole superficial and underlying tissues. *Per vaginam*, the anterior wall, from the neck of the bladder and uterus to the left as far as the finger could reach, was tumefied and corrugated, and until the dimensions increased so largely the finger could pass upwards beyond the margin of the tumor, and downwards behind it, easily learning that the floor of the posterior left half of the vaginal wall was free from any complication whatsoever. The os uteri was tender, but passing the finger behind the posterior lip, either per vaginam or rectum, there was no swelling or pain in that organ. With the finger in the above position, the fundus could be handled with impunity by the other hand on the abdomen.

With these lights, therefore, it was very natural to arrive at the conclusion that the cellulitis was of the phlegmonous variety, notwithstanding the teaching of the learned authors, and that it had its origin in the tissues lining a divided symphysis. According to Thomas, so generally does "periuterine cellulitis"—it is by this name he describes all cellular disturbance of the pelvic cavity—involve all the adipose and areolar tissue of the pelvic cavity on the side where it begins, and so rarely is it purely phlegmonous that it remained for M. Simon, about 1853, to publish the only case, proved by autopsic evidence to be phlegmonous, and from comments of the celebrated gynecologist it is to be inferred that this case was to him of very doubtful nature. That the case here in point was no more nor less than a large phlegmon is based upon the evidence of *touch*, gathered from daily examinations, together with the closest watching and arduous search among the literature for any facts which might throw light upon the subject. The case was not only extremely serious to the patient, but interesting to the medical attendant, and for these reasons as many as six visits in the twenty-four hours were frequently made to perfect the diagnosis, and watch the safe progress of the case.

This brings us to the second point of interest, viz., the point of evacuation. All authors agree that one of many, and sometimes two, points simultaneously may be selected by a pelvic abscess to evacuate itself, but not one of them has ever hinted at the labia as a probable or remote point of exit. It is well known that pus in finding an outlet, by preference follows that course which offers the least resistance. That the labia therefore offered the least resistance is proved by the fact that the pus was there found, having followed its own law uninterfered with and unaided.

Now, to draw a rational conclusion, why the labia was the most available point, and offered the least resistance, involves several points upon which the diagnosis of phlegmonous cellulitis was based. Had the inflammation been general, or involved the entire adipose and cellular tissues of that side, one of the several general outlets would most probably have been sought; it would have found its exit in one of three ways—through the vaginal wall near the posterior lip of the uterus; or perforated the wall of the rectum, and passed off by that channel; or passing through the obturator foramen or sacro-ischiatic notch, pointed along the line of the psoas muscle, making a psoas abscess; or sought one of the four other less probable points of discharge, for the simple reason that either of those directions would have offered least resistance from that position than the direction of the labia. That neither of these probable outlets was sought, is due to the fact of the peculiar character and location of the tumor. It was an irregularly round phlegmon, confined to the tissues lying immediately under the roof of the pelvis adjacent to and closely connected with the neck of the bladder and os uteri, on the front and left side; from this position, the direct line of pressure and least resistance was in the line of the arch of the pubis to the left, and immediately behind the left angle of the os vaginæ. The strong tissue of the left broad ligament being healthy, resisted pressure in that direction; the hard walls of the pubis resisted pressure from that side, so that the resultant was necessarily followed, and this being between the two forces, in a direction downwards and outwards, the labia became the point of rest of the several forces. Had it been otherwise, the diffused cellulitis, forming several small nuclei of abscesses, each having its own centre of pressure, would have gradually broken down and coalesced into one. The line of resistance would not have been as above described, and it would ultimately have discharged itself at one of the points most commonly sought.

For the reasons herein set forth, the opinion is held that the foregoing was a case of phlegmonous inflammation of the cellular tissue of the left anterior segment of the pelvis, and not one of "peri-uterine cellulitis," or "pelvic cellulitis," as defined by the authors.

PRELIMINARY REPORTS OF THE COMMITTEE ON DISINFECTANTS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

III.

MERCURIC CHLORIDE.

BY GEORGE M. STERNBERG, M.D.,
SURGEON U. S. ARMY.

THE use of corrosive sublimate as a parasiticide and as an antiseptic agent for the preservation of animal tissues, etc., has long been known; but the researches which have established its value as a disinfectant are of comparatively recent date. These researches, made during the past four or five years, have demonstrated that the bichloride of mercury occupies a leading place among known germicide agents. Miquel places mercuric iodide above the chloride as an antiseptic, and it may be that it has a correspondingly greater germicide value. But from a practical point of view the chloride must still be accorded the first place on account of its cheapness and solubility.

My own observations are in accord with those of Koch, of Jalan de la Croix, and others, as to the power of this agent in dilute solutions (1 : 1000 to 1 : 10,000) to destroy the spores of bacilli—*B. Anthracis* and *B. subtilis*—and this constitutes the most difficult biological test known. Micrococci and bacilli in active growth, without spores, are killed by much weaker solutions (1 : 20,000 to 1 : 40,000).

Klein, of London, is, so far as I know, the only author who has reported results in conflict with these. In his recent work on *Microörganisms and Disease*,[1] he says:

"By sowing any microörganism in a nourishing medium, to which has been added a certain substance (*e. g.*, carbolic acid to the amount of 1 per cent.), and exposing this medium to the conditions of temperature, moisture, etc., otherwise favorable to the growth of the organism, if we find after the lapse of a due period the growth is retarded or altogether inhibited, the conclusion is drawn that this substance (viz., the carbolic acid of 1 per cent.) is an antiseptic. There is nothing more fallacious than this mode of reasoning; a great many microorganisms can be exposed to a 1 per cent. solution of carbolic acid for hours without in the least being affected, for on being transferred to a suitable nourishing medium they grow and thrive well. Similarly, by placing the spores of Bacillus anthracis in a proteid medium containing perchloride of mercury of the strength of 1 in 300,000, it is found (as Koch has shown) that the spores are absolutely incapable of germinating. But if from this the conclusion is drawn that perchloride of mercury of the strength of 1 in 300,000 is a germicide, I should most strongly dissent, for perchloride of mercury even of the strength of 1 per cent. is not a germicide any more than vinegar; for on placing the spores of Bacillus anthracis in a proteid medium, to which so much vinegar or any other acid has been added as makes it decidedly acid, it will be found that the spores do not germinate."

I have recently had occasion to object to the use of the terms antiseptic and germicide as synonymous, and the confusion resulting from such a misuse of the term *antiseptic* is exemplified in the above quotation. No one familiar with the present state of knowledge upon the subject would think of inferring that mercuric chloride is a germicide in the proportion of 1 : 300,000, because anthrax spores do not germinate in culture-fluids containing this amount. But an agent which prevents the development of putrefactive bacilli is an antiseptic, for putrefactive decomposition is prevented by such an agent as well as by one which kills germs. A germicide is necessarily an antiseptic, but an antiseptic is not necessarily a germicide. Thus alcohol, chloride of sodium, borax, sulphate of iron, and many other agents constantly used as antiseptics, do not in the most concentrated solutions destroy the vitality of the spores of bacilli, and consequently are not germicides.

The statement made by Klein that "perchloride

[1] The Practitioner, Lond., Oct. 1884, p. 251.

of mercury even of the strength of 1 per cent. is not a germicide any more than vinegar" is opposed by the experimental evidence reported *in detail* by Koch, and by my own extended experiments with this agent. I am convinced that there must have been some defect in Klein's method of working, and that the spores which killed his guinea-pigs had not been fairly exposed to the action of the disinfecting agent. He says:

"I have tried the action of a number of substances in common use as antiseptics (*e. g.*, Calvert's fluid, pure terebene, phenol 10 per cent., perchloride of mercury 1 per cent.), on the spores of Bacillus anthracis, exposing these in comparatively large quantities to the above fluids (the two being well mixed) for twenty-four hours, and then inoculating guinea-pigs with them (spores and antiseptic). The animals died with symptoms of typical anthrax, the blood teeming with the Bacillus anthracis."[1]

The very definite evidence from various sources, a portion of which will be given below, as to the power of mercuric chloride to destroy the spores of anthrax in much weaker solutions than that used by Klein, and in a much shorter time, justifies the suspicion that these guinea-pigs died from accidental inoculation with spores not subjected to the action of the disinfectant. This suspicion is further justified by Klein's account of the frequent accidents of this kind which have occurred in his laboratory. Among other examples of this given in the work already referred to is the following:

"Another gentleman working in the laboratory of the Brown Institution intended to inoculate several guinea-pigs with human tubercles. For this end he mashed up in a saline solution, in a clean mortar, a bit of human lung studded with tubercles. He did this in my room on the same table on which I was working with anthrax. One of these guinea-pigs, inoculated with human tubercle, died before the second day was over of typical anthrax. Its blood was teeming with the Bacillus anthracis. Such an accidental anthrax in guinea-pigs inoculated with tubercle occurred several times. . . I myself had the following accidental contaminations." . . .[2]

We are not here directly concerned with the restraining influence of mercuric chloride upon the development of anthrax spores, but having made some recent experiments in this direction which fully confirm the results previously reported by Koch, I may be excused for referring to the matter, especially in view of the therapeutic and sanitary possibilities which suggest themselves in connection with this inhibiting action of corrosive sublimate in very dilute solutions. From a sanitary point of view, it is evident that an agent which is capable of preventing the development of disease germs in cesspools and privy-vaults in the proportion of 1 : 300,000 [*i. e.*, one pound costing 50 cents would inhibit the development of anthrax spores in 300,000 pounds of a suitable culture-fluid] has an interest for health officers quite independent of the interest which attaches to it as a potent germicide in stronger solutions.

Experiment, Dec. 22, 1884.—Mercuric chloride was added to a sterilized culture-fluid in the proportion of 1 : 100,000, 1 : 200,000, and 1 : 400,000, and two culture-flasks were filled from each solution. These flasks were then inoculated with anthrax spores from a pure culture, and another flask not containing the mercuric chloride was inoculated to test the stock. At the end of 24 hours the last-mentioned flask contained an abundance of anthrax filaments, the others remained clear. At the end of 48 hours the two flasks containing the bichloride in the proportion of 1 : 400,000 contained flocculi of anthrax filaments, and the others remained clear.

Davaine found that the virulence of serum containing anthrax bacilli, obtained from the subcutaneous cellular tissue of an animal recently dead, is destroyed by adding to it corrosive sublimate in the proportion of 1 : 150,000.[1] In this case no spores are present in the material.

The restraining power of this agent is not so great for the spores of *B. subtilis* as for those of anthrax. This was shown by an experiment made upon the same date as that above reported. At the end of 24 hours after inoculation with spores a mycoderma of *B. subtilis* had formed in solutions containing 1 : 100,000, and in 48 hours the same result had occurred in two flasks containing 1 : 50,000.

The inhibiting power of this agent is still less for microörganisms in active multiplication. Thus in my experiments reported in the *Am. Journal of the Med. Sciences*, April, 1883, the development of micrococci was prevented by 1 : 30,000 to 1 : 40,000. I have recently repeated these experiments with a similar result. To destroy the vitality of the same micrococci, as proved by their failure to grow in culture-fluids required 1 : 20,000, while the bacteria in broken-down beef-tea, containing spores, were destroyed by 1 : 10,000. According to Koch, mercuric chloride in the proportion of 1 : 1000 destroys all spores in a few minutes, and in weaker solutions—up to 1 : 10,000—he has shown by culture and inoculation experiments that this agent destroys the vitality of anthrax spores.

The results of his culture and inoculation experiments are not, however, entirely in accord, and it seems probable that failure to develop upon the surface of a solid culture-medium after ten minutes' exposure to 1 : 20,000 may have been due to the restraining influence of a small amount of bichloride not removed by the washing in alcohol which was resorted to for the purpose of getting rid of this complication. Fluid cultures possess an evident superiority for such experiments as this, for when a very small quantity of spore-containing material is introduced into flasks containing a large quantity of culture-fluid the disinfecting agent is diluted beyond any possibility of interfering with the success of the experiment. Moreover when spores fail to develop in such fluid-cultures it is easy to prove that the failure relates to loss of vitality on the part of the spores, and not to the presence of an inhibiting agent. This

[1] Op. cit., p. 253.

[2] Microörganisms and Disease. The Practitioner, Lond., Aug. 1884, p. 110.

[1] Recherches sur le traitement des maladies charbonneuses chez l'homme. Bulletin de l'Acad. de Méd., 17 Juillet, 1880, p. 557.

I am in the habit of doing by inoculating the same culture-fluid with other spores not disinfected, and the rapid development of these is satisfactory evidence that in the first experiment failure to develop was not due to the small amount of mercuric chloride introduced in the inoculation with disinfected spores.

The view that in Koch's surface-cultures the inhibiting influence of the bichloride came into play, is sustained by his own inoculation experiments and by my culture experiments reported below. Thus we are informed[1] that three mice were inoculated with anthrax spores, attached to strands of silk thread, which had been exposed for ten minutes to solutions of the strength of 1 : 10,000, 1 : 20,000, and 1 : 50,000. All of the mice died of anthrax, but while the one inoculated with the strand exposed to 1 : 50,000 died in the usual time—on the second day—the one inoculated with 1 : 20,000 did not die until the fourth day and the one with 1 : 10,000 not until the fifth day.

That anthrax spores may survive exposure to a solution of 1 : 10,000 for a longer period than ten minutes is also shown by the following experiments.

Dec. 18, 1884.—A *small quantity* of a culture-fluid containing anthrax spores was exposed for *one hour* to mercuric chloride in the proportion of 1 : 10,000. No development of anthrax bacilli occurred in a culture-flask inoculated with these spores, but in another experiment, made at the same time, in which the proportion of the disinfectant and the time of exposure remained the same, and in which a *much larger quantity* of the spore-containing culture-fluid was used, there was an abundant development of anthrax bacilli in the inoculated culture-flask.

It is evident that in this experiment a material change in the conditions was made, although the time of exposure, and the amount of the disinfecting agent present, were the same in both cases, and that in experiments of this kind the amount of material to be disinfected must also be taken into consideration. In other words, a few germs may be destroyed by a comparatively dilute solution of the disinfecting agent, while stronger solutions will be required for the destruction of a large number of germs contained in the same amount of material. Again it is true of mercuric chloride as well as of oxidizing disinfectants, such as potassium permanganate and the hypochlorites, that the quantity of non-living organic material present will also materially influence the result. This is illustrated by my experiments reported below in which semi-solid feces was the material subjected to the action of the disinfectant.

The spores of *B. subtilis* are destroyed by about the same proportion of mercuric chloride as is required to kill anthrax spores.

Experiment, Dec. 22, 1884.—A small amount of a culture-fluid containing the spores of *B. subtilis* was exposed to the action of a solution of corrosive sublimate of the strength of 1 : 10,000, for 30 minutes; a like amount was exposed for 1 hour, and a third portion for 2 hours. Two culture-flasks were inoculated with spores from each. At the end of 24 hours those inoculated with the material exposed for 30 minutes showed an abundant development of *B. subtilis*, and the others remained clear.

The importance of the time of exposure to the action of the disinfecting agent, which is clearly brought out in the above experiment, is very well illustrated by the experiments on vaccine virus reported by Dr. W. J. Miller, of Dundee.

"I have made fourteen observations with this agent on vaccine. In one of these, it was tested in the following manner: I placed half the contents of a well-filled tube on a glass slide, and after it dried, covered it with some perchloride solution (1 in 1000), and after allowing it to lie for ten minutes, washed off the perchloride gently with water, so that the film of vaccine remained; this was then rubbed up with water, and put in a tube for use. The product entirely failed to take, while the other half of the same specimen of lymph produced a good result. Another specimen was mixed with an equal quantity of the same solution (1 in 1000), and was used an hour thereafter, disinfection being complete. Two trials were made with the same mixture, prepared immediately before use; two, after an interval of three minutes, and one, after fifteen minutes; and in all five, the lymph was uninjured. Five experiments were made with a solution of 1 in 500, and vaccine in equal proportions [= 1 : 1000.—G. M. S.], mixed respectively, immediately before use, a few minutes, three minutes, three minutes, and five minutes; and in all, the lymph was in no way affected. Two observations with lymph, and a still stronger solution, 1 in 250, in equal proportions, mixed immediately before use, gave the same negative result."[1]

According to Arloing, Cornevin, and Thomas, the activity of dried virus of symptomatic anthrax is destroyed by mercuric chloride in the proportion of 1 : 5000.

Jalan de la Croix found that the bacteria in beef *bouillon* were destroyed by 1 : 6500, but that the proportion required to destroy bacteria in a beef infusion made without heat was 1 : 2525.

It is evident that in the absence of precise information, as to time of exposure and other essential conditions, these results cannot be compared directly with those reported by other observers in which the material tested or the conditions of the experiment were different.

In the writer's experiments reported in the *American Journal of the Medical Sciences* for April, 1883, the bacteria in broken-down beef-tea (old stock exposed in the laboratory for a long time) were destroyed by two hours' exposure to mercuric chloride in the proportion of 1 : 10,000, the amount of material exposed to the action of the disinfecting agent being comparatively small.

Extended experiments upon the disinfection of tuberculous sputum have been made by Schill and Fischer, and are reported in their paper published in the second volume of the *Mittheilungen aus dem Kaiserlichen Gesundheitsamte*. In these experiments, the test of disinfection was failure of the material to produce tuberculosis when inoculated into susceptible animals.

In a first series of experiments with *dried* sputum,

[1] Mitth. a. d. k. Gesundheitsamte, I. p. 277.

[1] The Practitioner, Lond., Oct. 1884, p. 265.

which had been kept for several months, a negative result was obtained in every case from the following inoculations: Two guinea-pigs inoculated with material exposed for twenty-four hours to 1 : 1000; three with material exposed for twenty hours to 1 : 2500; and three with material exposed for twenty hours to 1 : 5000.

In another series of experiments with *fresh* sputum, in which the sublimate solution and the material to be disinfected were used *in equal amounts*, tuberculosis resulted in all of the test-animals. Three of these were inoculated with material exposed for twenty-four hours to 1 : 2000 (*i. e.*, equal parts of sputum and of a 1 : 1000 solution), and three to material exposed for twenty-four hours to 1 : 1000.

The failure to disinfect in these experiments was probably due to the fact that the viscid mass of sputum was not penetrated throughout by the disinfecting agent. In the successful experiment with dried sputum, the amount of material used was no doubt much smaller, and its physical condition (pulverized?) such as to insure the action of the disinfectant upon every portion of it.

In a previous paper (THE MEDICAL NEWS, Jan. 10, 1885, p. 34), the writer has recommended the use of a solution containing 1:500 of mercuric chloride and 1 : 500 of potassium permanganate as an efficient disinfectant for sputum and for the discharges of patients with typhoid fever and cholera. The experiments of Schill and Fischer, which I had not read when this recommendation was made, indicate that it will be necessary to use some other agent when the object in view is to destroy the infective virulence of tuberculous sputum. And, in general, it will no doubt be better to use an oxidizing disinfectant, such as the hypochlorite of soda, when the germs to be destroyed are embedded in masses of albuminous material. For such masses are disintegrated and destroyed by oxidizing agents, whereas corrosive sublimate has the opposite effect, in consequence of its power of combining with and coagulating albuminous material. For liquid fecal discharges, however, our recommendation is sustained by the experimental evidence.

The following experiments have been recently made: The standard solution above referred to—mercuric chloride and potassium permanganate, of each 1 : 500—was diluted one-half, and mixed with an equal quantity of broken-down beef-tea (= 1 : 2000). After exposure for two hours, the contained germs had lost their vitality, as proved by culture-experiments.

A more difficult test was the following: The standard solution was diluted one-half, and mixed with semi-solid feces in equal quantity, well-mixed by stirring. Two culture-flasks were inoculated from this at the end of 30 minutes, two more at the end of 1 hour, and two at the expiration of 2 hours. One of the flasks inoculated at the end of an hour broke down, the others remained clear. In the case of the flask which broke down, it is probable that some little mass of material was introduced which had not been thoroughly penetrated by the disinfecting agent. When the standard solution was diluted with three parts of water, and added to an equal amount of broken-down beef-stock (= 1 : 4000), two hours' exposure failed to prevent the subsequent development of the contained spores in a sterilized culture-fluid.

The experimental data herein recorded seem to justify the following conclusions:

Mercuric chloride, in aqueous solution, in the proportion of 1 : 10,000, is a reliable agent for the destruction of micrococci and bacilli in active growth not containing spores; and in the proportion of 1 : 1000 it destroys the spores of bacilli, provided that the microörganisms to be destroyed are fairly exposed to its action for a sufficient length of time.

A standard solution of 1 : 1000 may be safely recommended for the disinfection of bedding and clothing which can be washed; for washing the floors and walls of infected apartments; for disinfecting the hands and instruments of surgeons and gynecologists; and as a disinfecting wash for superficial wounds or mucous surfaces. For continuous application to wounds, etc., a solution of 1 : 10,000, or less, should be effective.

A standard solution of 1 : 500, with the same quantity of potassium permanganate, may be safely recommended for the disinfection of liquid fecal discharges, and other fluid material supposed to contain "disease germs," provided the time of exposure is not less than two hours, and the quantity of material to be disinfected is not in excess of that of the standard solution used.

SUCCESSFUL TREATMENT OF A CASE OF TRIGEMINAL NEURALGIA WITH NITROGLYCERINE.

BY S. P. DEAHOFE, M.D.,
OF POTSDAM, OHIO.

THE successful treatment of the following case renders it of sufficient interest to merit reporting.

H. J. A., aged 55, a farmer, with whom I was personally acquainted, family history good, came to my office, September 27, 1884, with the following history:

He had suffered pain, of a paroxysmal character, in the right side of the tongue for the past four years. The paroxysms of pain had increased in frequency and severity, so that when I saw him he had as many as half a dozen or more attacks in an hour, the pain "darting in the tongue like a knife," to use the patient's expression, interfering with mastication and also with his speech, so that he would be compelled to stop talking until the pain ceased, which would be in a few seconds. There was also marked spasm of the facial muscles of the same side of the face, the mouth being drawn to the right side. The teeth remaining were perfectly sound. His family physician had treated him for "paralysis of the tongue, due to his teeth," to use the doctor's own language, with various remedies. He had also been treated from time to time by a number of other physicians, both regular and irregular, all making similar diagnoses excepting one, who called it neuralgia.

I diagnosticated neuralgia of the gustatory branch of the trigeminus, and informed the patient of the

uncertainty of medicinal remedies in that affection, and the results of the operation of neurectomy. I concluded to try a few medicines first, and if they failed, then to perform neurectomy. Accordingly, I prescribed aconitia (Duquesnel's), in gradually increasing does, for two weeks, but to no purpose, the paroxysms still increased in number and severity.

The patient, becoming very much discouraged, then demanded an operation, refusing to take any more medicine. I then requested a consultation with Dr. J. C. Reeve, of Dayton, Ohio. The day for consultation was set; but being called to the country, the patient went to see Dr. Reeve in my absence. The doctor agreed with me in my diagnosis, and induced the patient to continue medicinal remedies yet awhile, giving him a one per cent. solution of nitroglycerine, concluding, as he afterward informed me, that the lesion was central.

In a few days, the patient reported to me a little better. I accordingly had the solution continued, in doses of one minim three times a day, with the following results:

After taking the solution two weeks, he was completely relieved. He then neglected taking it for a few days, when the pain returned, but not so severe as before. I then ordered him to continue its use. After taking the solution sixteen days more the patient was again free from pain and it has not returned since, and he was able to eat and talk as well as ever. He also says his mind and memory are far better; that his taste, which was much blunted before taking the remedy, is now normal; and that his eyes are so much improved that he can now read print without his glasses, which was difficult to read with them before taking the solution—in fact, he says he feels like a new man.

MEDICAL PROGRESS.

FURUNCLE OF THE SEBACEOUS AND SWEAT FOLLICLES.—DR. JOSEF RABITSCH, of Cairo, gives the following points of differential diagnosis between furuncle of the sebaceous follicles and the same disease in the sweat glands:

1. Sebaceous furuncle appears only on those parts of the body supplied with sebaceous glands.

2. The overlying skin is very red and inflamed, and the swelling is conical in shape.

3. At the end of four or eight days, there is an exudation through a crater-like opening.

4. After the discharge of the exudation, the resulting excavation is symmetrical and covered with healthy tissue, and cicatrizes very rapidly.

5. It may appear at any season.

Furuncle of the perspiratory glands:

1. Appears on all parts of the body, even upon the palm of the hand and sole of the foot.

2. The swelling is globular, and the overlying skin of a bluish-red color.

3. It opens in from eight to fourteen days, or later, at the point of its original appearance, or near by it, after necrosis of the skin and destruction of the adipose tissue.

4. The excavation, after the discharge of its contents, is unsymmetrical, and shows little inclination to heal.

5. It appears almost invariably in hot seasons of the year.—*Wien. med. Wochenschr.*, Dec. 13, 1884.

AN OPERATION FOR ŒSOPHAGOSTOMY.—At a late meeting of the Medico-Chirurgical Society of Edinburgh, MR. CHIENE showed a woman, æt. 32, on whom he had performed the operation of œsophagostomy. She suffered from a tumor situated behind the box of the larynx, which it was at first hoped was specific, but anti-specific remedies had failed to produce any effect. When she was unable to swallow, and was dying of inanition, the operation of œsophagostomy was proposed in preference to gastrostomy. Mr. Chiene thought he had made a slight improvement on the ordinary method of opening the œsophagus, by first incising the muscles—the anterior fibres of the sterno-mastoid and the posterior fibres of the sterno-hyoid and sterno-thyroid. By so doing, the access to the œsophagus was rendered much easier, as was also the stitching of the mucous membrane to the skin, the tension being reduced. The tumor had diminished since the operation was performed, and if she improved in weight, an attempt might be made to remove it. She was easily fed by the new mouth in the neck, the only disadvantage being the want of saliva.—*Edinburgh Medical Journal*, January, 1885.

A NEW OPERATION FOR RESECTION OF THE STOMACH.—The *Wien. med. Wochenschrift* contains an account of a modified operation for resection of the stomach which HERR BILLROTH lately performed. After performing gastro-enterostomy according to Wölfler's method, he removed a carcinoma the size of a fist, cut through the duodenum beyond the carcinoma, and sutured the proximal end. The stomach was then opened above the cancer (about the middle), and the distal end of the duodenum sutured in the opening. The food entering the stomach accordingly passes into the far end of the duodenum.

This method of operation is applicable in such cases in which the extent of carcinomatous infiltration is so wide that union of the remaining portion of the stomach with the duodenum is not possible.

The patient endured the operation, which lasted more than an hour, well, and the day following was in good condition. At first he vomited the water which he drank, but shortly took milk and wine with relish. His appearance was better and pulse stronger and fuller than before the operation.—*Deutsche med. Wochenschrift*, Jan. 22, 1885.

THE THERAPEUTIC EFFECT OF CAFFEINE.—CURSCHMANN, in the *Deutsche med. Wochenschr.* of January 22, 1885, summarizes the therapeutic effect of caffeine as follows:

1. Caffeine and its salts are well tolerated, and even in large doses (30 grains per day) are harmless remedies.

2. Caffeine in large doses, 15 to 30 grains per day, has in many cases a pronounced diuretic effect, which is dependent upon the elevation of the arterial pressure. The movements of the heart become more regular, while a slowing of the pulse, worthy of mention, because frequently found, is absent.

3. This want of parallelism between the elevation of the aortic pressure, and a diminution of the frequency of the pulse, does not permit the action of caffeine and digitalis to be considered identical. It is, therefore, not established that caffeine is to be considered as an agent to regulate the heart, in the same sense as digitalis.

4. The diuretic operation of caffeine is no quicker, and frequently not so continuous as the corresponding dose of powdered digitalis.

Relative to a cumulative action of the drug, Curschmann, in very many cases in which large or long-continued doses were administered, has observed no such effect. Sometimes vomiting, malaise, and headache are observed, and some persons are so uniformly unfavorably affected in this manner, that the use of the drug is contraindicated.

PERMANENT SURGICAL DRESSING.—At a late meeting of the Academie de Médecine de Paris, M. MARC SÉE read a paper upon a method of permanent surgical dressing. When the wound is at the point which is to be sutured, M. Sée arrests the flow of blood as thoroughly as possible, at first by means of a catgut ligature and then by the aid of a light insufflation of powdered subnitrate of bismuth. When all oozing has ceased, he makes, when the wound has a certain extent, a number of catgut sutures and then introduces tubes of red caoutchouc to insure drainage, The wound is again treated with powdered bismuth, and is then covered with phenolized dressing, in which is enclosed a small quantity of corrosive sublimate. The dressing is kept in place by gauze bands, over which is applied a rubber band. The tubes are withdrawn at the end of three or four days, and the dressing is not removed for fifteen days or three weeks, or when cicatrization is complete. —*Le Progrès Médical*, Jan. 10, 1885.

THE ANTISEPTIC USE OF IODOFORM.—DR. MOSETIG-MOORHOF, in the *Wien. med. Presse* of Jan. 4, 1885, cites the various preparations of iodoform useful in different conditions:

(*a*) The powdered iodoform.

(*b*) Iodoform stick, elastic or stiff, according to the use to which it is to be applied, prepared with gelatine, gum acacia, or cacao butter, for introduction into fistulæ, by which they are kept open, and a passage maintained for the exit of discharges.

(*c*) Iodoform gauze, obtained by the saturation of gauze by a thirty or fifty per cent. ethereal solution of iodoform without addition of adhesive material.

(*d*) Iodoform emulsion, containing ten to fifty per cent. of iodoform, ten per cent. of water, and twenty-five per cent. of gum tragacanth. This form is applicable to compound fractures, to joint cavities, and to cold abscesses.

Iodoform in the formula: iodoform, 1 part; benzol, 9 parts; ol. vaselini, 11 parts, is valuable for parenchymatous injection in struma and uncaseified lymph glands, with excellent results.

It is also valuable in burns when applied in the form of iodoform gauze moistened in a mixture of glycerine and water, .1 to 3, and covered with wadding surrounded by an impermeable gutta-percha sheath.

No evidences of poisoning have appeared with this application, even when it has been used in burns of great extent.

USE OF COCAINE IN LITHOTRITY.—Lithotrity with rapid evacuation of the fragments (Bigelow's operation) was performed recently at St. Peter's Hospital with perfect success. The bladder was injected with a half ounce of a four per cent. solution of cocaine, and the operation was begun and completed painlessly in a quarter of an hour.—*Lancet*, Jan. 17, 1885.

TREATMENT OF PHTHISIS BY ARSENIC.—DR. KLEMPNER, after a lengthy discussion on the use of arsenic in phthisis, arrives at the following conclusions:

1. Arsenic seems to exert a good effect upon the general nourishment and condition of phthisical patients.

2. A trial of it appears indicated in all phthisical cases in which no special contraindication exists.

3. A contraindication may be:

(*a*) Special idiosyncrasy against the remedy which now and then exists.

(*b*) Prominent tendency to hemorrhage.

(*c*) Organic disease of the intestinal tract and tubercular disease of the colon.

(*d*) Disease of the kidneys through which the regular excretion of the poison from the body is rendered difficult.—*Med. Chirurg. Centralbl.*, Jan. 16, 1885.

COLA.—After an exhaustive therapeutic and physiological study of the properties of cola, DR. MONNET reaches the following conclusions as to its nature and value in medicine:

1. Cola, on account of the caffeia and theobromine which it contains, is a tonic to the heart, quickening its beat, increasing its power, and steadying its contraction.

2. In the second phase of its action, like digitalis, it regulates the pulse; under its influence, the pulsations become fuller and less frequent.

3. As a corollary to its action upon the blood pressure, there is increased diuresis, whence cola is usefully employed in affections of the heart complicated with cardiac dropsy.

4. Experiment seems to show that cola, which causes energetic contraction of the heart and increases the contractility of the muscles of organic life, on the contrary, exercises a paralyzing effect upon striated muscles when employed in toxic doses.

5. It prevents tissue waste and diminishes the production of products resulting from the destruction of nitrogenous elements (urea), and probably exercises a special action upon the nervous system.

6. In virtue of the principles it contains, it is a powerful tonic, and its use is indicated in anæmia, in chronic debility, and in convalescence from serious diseases.

7. It favors digestion, either by augmenting the secretions of the stomach, or by its action upon the muscular coat of the stomach, which is rendered less atonic in certain forms of dyspepsia. Under its influence anorexia disappears, and the digestive functions are regulated.

8. Finally, it is a remedy which has given markedly beneficial results in chronic diarrhœa, and in certain cases of sporadic cholera (Huchard, Duriau), without its being possible to explain its action physiologically. —*Bulletin Général de Thérapeutique*, Jan. 15, 1885.

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will be liberally paid for upon publication. When necessary to elucidate the text, illustrations will be furnished without cost to the author. Editor's Address, No. 1004 Walnut St., Philadelphia.

SUBSCRIPTION PRICE, INCLUDING POSTAGE,

PER ANNUM, IN ADVANCE, ... $5.00.
SINGLE COPIES, ... 10 CENTS.

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made, at the risk of the publishers, by forwarding in *registered* letters.

Address, LEA BROTHERS & CO.,
NOS. 706 & 708 SANSOM STREET,
PHILADELPHIA.

SATURDAY, FEBRUARY 21, 1885.

LAPAROTOMY FOR GUNSHOT WOUND OF THE SMALL INTESTINE.

IN the issue of THE MEDICAL NEWS for last week may be found an important contribution to the practical surgery of gunshot wounds of the intestines, from the pen of DR. W. T. BULL, of New York. A man, 22 years of age, was shot with a pistol of thirty-two calibre, the ball entering the abdomen near the umbilicus. At the expiration of seventeen hours, when the pulse was 102, the respiration 30, and the temperature 100.2° F., and when there was severe pain, with slight tenderness, Dr. Bull, under strict antiseptic precautions, opened the belly by a median incision extending from the umbilicus to just above the pubes. About two pints of bloody serum, containing small clots, escaped, and the intestines and mesentery showed marked evidences of peritonitis. An incised wound of the serous coat alone, made by the scissors, was tied with catgut, seven perforations were closed with Lembert's suture, iodoform was rubbed over the lines of union, and the bullet, lodged in the upper surface of the sigmoid flexure close to its mesenteric border, was removed, and the perforation united with three stitches. The man was enjoying excellent health at the expiration of three months.

The case thus briefly outlined is the first successful one of its kind on record. Kinloch, of Charleston, in 1882, did a tentative laparotomy, and sutured five pistol-shot wounds of the small intestine. On death, in thirty-two hours, two additional perforations were found to have been overlooked. In a third case, Jordan Lloyd, of Birmingham, opened the belly for suppurative peritonitis on account of a similar injury. The intestine, perforated in two places, was stitched to the abdominal wound, but the patient succumbed in two hours.

In the discussion which followed the reading of Dr. Bull's paper before the New York Surgical Society, there was a disposition to question the propriety of the operation, first, because of the asserted absence of signs of perforation or of peritonitis; and, secondly, because it was assumed that the fibrinous effusion would have sufficed to close the perforations and rendered spontaneous recovery possible.

With regard to the first objection, it may be asserted that it had no foundation in fact. On the admission of the patient, half an hour after the reception of the injury, the pulse was 96, the temperature 97.8°, and the respiration 18. When laparotomy was resorted to, the pulse was 102, the temperature 100.2°, and the respiration 30; the belly, moreover, was tender, the pain was severe, and the patient had vomited. Surely these symptoms indicated commencing peritonitis, and it would have been a grave error to have waited until they became more intense. The second objection was equally groundless. Spontaneous recovery after gunshot wounds of the small intestines is exceedingly rare, if not, indeed, questionable. Otis states that there is not a single incontestable example of recovery achieved by the unaided efforts of nature on record, and the case reported by Andrews, of Chicago, in the *Weekly Medical Review*, No. 22, 1884, does not invalidate the result of his investigations. In this case, a boy sixteen years of age was shot with a twenty-two calibre pistol-ball, which entered the belly in the linea alba an inch above the umbilicus. The treatment consisted of starvation and opium, the ball passed per anum in a week, and recovery was rapid. There is no evidence, however, that the small intestine was opened in this instance, it being far more probable that the stomach or transvere colon was the seat of the injury.

Not only has ample experience in the human subject shown that these lesions are almost necessarily mortal, but experiments upon the lower animals have served to explain why spontaneous recovery is out of the question in wounds of the magnitude met with by Dr. Bull, several having been half an inch in diameter. In his monograph, entitled "An Experimental and Critical Inquiry into the Nature and Treatment of Wounds of the Intestines," published in 1842, the late Professor Gross states that when the opening is half an inch in extent, there is almost invariably an escape of fecal matter, speedily followed by peritonitis. If such an untoward result attends incised wounds six lines long, we may naturally infer that fecal extravasation must ensue from a gunshot perforation six lines in diameter, since the

contraction of the opening and the eversion of the mucous membrane, which are nature's resources in closing minute wounds, are absent in lesions produced by projectiles, even of small calibre, which, as shown by the experiments of Parkes, published in THE MEDICAL NEWS for May 17, 1884, produce extensive and severe lacerations.

In view of the grave prognosis of shot wounds of the small intestines, which are, as a rule, multiple, we are firmly convinced that the expectant treatment should henceforth be entirely abandoned. In all cases, as soon as the diagnosis of penetration of the abdominal cavity has been established, an exploratory laparotomy is demanded, whether signs of peritonitis be absent or present. If the intestine be found to have escaped, little, if any, harm will ensue, whereas if the gut be opened the wound can be closed with sutures, and hemorrhage arrested, thereby materially enhancing the chances of recovery. When the perforations are in close proximity to each other, the affected portion of the gut should be excised, the divided ends be approximated, and the coil be returned into the belly. The formation of an artificial anus, as attempted by Lloyd, is not desirable.

In THE MEDICAL NEWS for October 18, 1884, we called attention to Kocher's successful laparotomy and enterorrhaphy for a pistol-shot wound of the stomach; to an equally successful similar operation by Mikulicz for peritonitis, the effect of perforating ulcer of the ileum; and to a laparotomy by Krönlein for peritonitis, resulting from perforation of the vermiform appendix, with resection of the latter. In addition to these cases, which serve to illustrate what should long since have been an established principle of treatment, Tiling has recorded in the *St. Petersburger medicinische Wochenschrift*, No. 44, 1884, a recovery after laparotomy for a penetrating knife wound of the stomach. The peritoneal cavity was filled with blood, and a wound, two-fifths of an inch long, in the posterior wall of the viscus was closed by three sutures passed through the muscular coat, and four points of Lembert's suture carried through the serous coat. The presence of a wound in so unusual a situation, the knife having entered through the anterior wall of the belly, shows that the posterior wall of the stomach presents forward when it is distended by food. The patient, a male, 19 years of age, vomited immediately after the reception of the injury, through which the escape of the contents of the stomach into the peritoneal cavity was prevented.

From these facts we are led to the belief that not only is suturing, with or without enterectomy, indicated in gunshot wounds, but that it should also be resorted to in all perforations, be they traumatic or pathological, of any portion of the gastrointestinal tract.

CHOLERA PROSPECTS.

THE great majority of American physicians and sanitarians are of the opinion that it is rather more than an even chance that Asiatic cholera will be brought to our shores in the course of the present year, and this opinion is based on the history of previous epidemics. As the course of the disease in Europe last year was somewhat different from that which it has followed in previous epidemics, and as it has not yet appeared in those regions from which the tide of emigration sets most strongly towards the United States, the danger can hardly be said to be immediate and pressing. Still, there is no doubt that the danger is a very real one, and that those who are charged with the duty of caring for the public health are incurring grave responsibility if they hesitate or delay to take the precautions which all are agreed will be most efficacious in preventing the admission or limiting the spread of this disease.

We are sorry to be compelled to say that for the most part they are doing very little. As yet Congress has taken no action in the matter, and there is not the least probability that it will consider any of the bills which are now before it, for the establishment of a National Health Board or Bureau. What little power the present National Board possessed under the so-called Quarantine Act of 1879 has disappeared with the lapse of the four years during which alone that act was to remain in force.

It is true that if sufficient funds are granted to the Board, this want of power will not be greatly felt. The composition of the Board has changed to a considerable extent since it did its best work in 1879–80, and the action of the Conference of State Boards of Health at Washington, in recommending to Congress a Board organized on a totally different principle, shows that it has, to some extent at least, lost the confidence of the sanitary authorities of the country. As, however, the active support of these authorities did not seem to be of much assistance to the Board in securing appropriations from Congress, it is probable that the loss of this support will not do the Board much harm.

It is quite probable that Congress, before adjournment, will appropriate half a million of dollars to be used by the President as an epidemic fund, and as the members of the National Board of Health are decidedly in harmony, politically, with the incoming administration, it is quite likely that they will be able to induce the President to intrust it with the expenditure of the money, in which case the old friends of the Board will, for the most part, again take it into favor; which is probably the best solution of this part of the problem now possible.

But the action of Congress is of small importance as compared with what could be done by State and Municipal authorities, and yet many of these show

no signs of activity. Pennsylvania is still without a sanitary organization. Philadelphia still contains thousands of cesspools and privy vaults, and has the unenviable reputation of having the worst system of sewerage of any large city in the United States, with the exception of Baltimore. The soil of these two great cities, Philadelphia and Baltimore, is thoroughly saturated with organic matter by soakage from cesspools, vaults, and leaky sewers; and if it is true that cholera flourishes above such soils, their prospects are gloomy. It would be easy to specify many smaller cities and towns which are even worse prepared to meet Asiatic cholera than the two we have named, and which are doing nothing—waiting stupidly for the blow to fall. If it does come, we shall, no doubt, have a sort of sanitary revival; but what a pity it is that such a revival is not already in full blast. Asiatic cholera in this country means the loss of millions of money as well as of many lives. Five hundred deaths from the disease in Philadelphia will cause a loss to this city of more money than would give it an abundant and pure water supply and a thoroughly good system of sewerage twice over. There is little hope that our City Government will do anything; but is it not possible that there are two or three hundred intelligent citizens who have enough energy and enough at stake to induce them to take hold of the matter and compel some action?

VERSIONS AND FLEXIONS OF THE UNIMPREGNATED UTERUS.

THE last and concluding lecture of DR. VAN DE WARKER'S series upon versions and flexions of the unimpregnated uterus is given in this number of THE NEWS. These elaborate lectures require, as they certainly deserve, careful study for their proper appreciation. Probably no one else in the United States is so familiar with the literature of the subjects treated as is Dr. Van de Warker; his lectures constitute an important contribution to medical progress, and their preparation required extensive research, careful comparison, large experience, and wise judgment.

In connection with this subject, we desire to call attention to a few points in regard to which differences of opinion exist. Dr. Van de Warker adopts the view generally held, that lactation promotes uterine involution. Certainly, such opinion seems quite reasonable; nevertheless it did not receive the endorsement of Depaul, nor does it that of Charpentier, while Milsom claims to have proved that, so far from lactation promoting, it delays the involution of the uterus. Possibly there may be found a reason for this result in the fact that the woman who does not nurse is liable to a new pregnancy, and hence the necessity for the uterus being speedily restored to suitable condition, while a similar liability is much less in the nursing woman.

In the treatment of flexions of the uterus, Dr. Van de Warker rejects dilators, as well as Emmet's operation, to straighten and enlarge the cervical canal in anteflexion; he speaks of the latter as a formidable operation, and not free from danger, and that he has seen no good results from the few cases in which he has done it. He strongly advocates the stem pessary, and in this, is at one with Bantock, while many other authorities are opposed to this method—Dr. Emmet, for example, remarking in his well-known work: "As soon as the true condition comes to be appreciated, the use of the intrauterine stem will be abandoned as a most irrational instrument." Schultze, whose valuable work is almost essential for a complete study of these diseases, rejects stem pessaries in anteflexion, stating that it would be much more rational to shorten the contracted retrouterine ligaments by methodical tractions upon the neck, than to seek to restore the form of the uterus by mechanical means. Our own experience leads us to believe that the dangers of the stem pessary have been exaggerated; we doubt not that when the instrument is used with the precautions Dr. Van de Warker advises that the risk is very little. But the question as to their beneficial result is a larger one, that cannot be so readily answered. Possibly the truth lies in the mean, rather than in either extreme, and there may be an ultraism in the advocacy of the instrument, as well as too much conservatism in its rejection.

A DOCTOR'S BANK.

In a controversy which has lately appeared in one of our Southern contemporaries between a celebrated New York specialist and a visiting Georgia doctor, one of the subjects of a by-no-means amicable discussion is the propriety of displaying fees on the table of the consultant. The Georgia doctor thus narrates his grievance:

"On his left [the consultant's] is a pile of $20 bills held down by an ill-shapen stone. Just across this *exchequer for the public gaze* is the chair in which all visitors are peremptorily told to 'sit down.'"

To this impeachment, the consultant replies in the next issue of the journal as follows:

"As to my fees, I leave them on the table through the morning as they are paid by patients. I have no family practice, and most of those who consult me prefer to pay for each visit, as is a common practice in this city. I had several first patients every day, and there were, of course, several twenty dollar bills on the table every time Dr. —— came to my house."

It was, it must be confessed, a rather harrowing spectacle for a country doctor to see from his chair every time he raised his eyes a pile of $20 notes so

voluminous that a stone of any shape was required to keep them down. But he appeals, as we shall do, to the ethical side of this question. Appreciating his feelings on witnessing the spectacle of so much money, a part of the paltry gains of a single morning, we will attempt nevertheless to rise above the moral depression thereby occasioned, and ask our readers, Is it proper thus to display to the world the lucrative business of the medical practitioner? We can conceive that in the hurry of visits—indeed, we know—it is not always easy to dispose of the fast-accumulating bills in even our plethoric wallet. Yet it is quite possible to have a convenient drawer in which they can be speedily stored. In fact, one of those mysterious Jacks with a snapping mouth or protuberant belly, into whose depths good little boys are beguiled to bestow their pennies, may be utilized for the keeping of a doctor's twenty dollar fees. Very celebrated doctors have, however, hesitated to trust all contrivances of this kind, and have preferred to keep the money under their own eyes, as both safer and far more delectable. We are told that Ricord, the celebrated syphilographer, always allowed his Napoleons and sovereigns to accumulate on his table, chiefly, however, as a reminder to his patients that he expected immediate remuneration. That he, also, gratified himself with the sight of it, like the miser in "The Chimes of Normandy," is not improbable.

We can understand that displaying his fees, like the gambler's bank at Monaco, may have its uses to a canny doctor. But after all that can be said in favor of it, we must admit that it wears an air of charlatanry. It is an old trick, for we find that Hudibras's lawyer had

> —— money placed for show,
> Like nest-eggs, to make clients lay,
> And for his false opinions pay.

THE USE AND ABUSE OF BATTEY'S AND TAIT'S OPERATIONS.

THE restriction of an operation within proper limits is quite as important as its invention. He who devises a new operation is in danger of giving it undue importance, or if too modest, too wise, or too conservative in his nature to do so, he is sure to have followers who will exaggerate its value. Hardly a score of years have passed since bilateral division of the cervix uteri was done as often during a single month in Scotland, or in London, or in the United States, as it is now done in half a dozen years. Then one operator would boast of having performed it hundreds of times, now it is an almost forgotten operation, or at least rarely performed.

That which is known as Battey's operation was first done about thirteen years ago, and has been performed scores of times both at home and abroad. In some cases it has brought no good, in others death has followed, while in the majority it has resulted beneficially. But still, notwithstanding the limitations which Dr. Battey has assigned it, there is not entire agreement in the professional mind as to the cases which require it; we fail in the knowledge which can only come from large experience and continued observation, so that for a time at least, absolute rules cannot be laid down, but it is quite probable that even some of the limitations referred to are themselves but temporary and provisional, and will after a time be materially altered or entirely cast aside.

A similar remark may be made as to the operation known as Tait's, an operation which in this country is not so familiar to the profession as Battey's; the conditions which are alleged to require it are not so plain, and the diagnosis is more difficult. It is an operation, too, which finds no favor with some of the best London authorities, such as Sir Spencer Wells and Dr. J. Matthews Duncan.

Dr. W. H. Baker recently read a paper, with the title, "The Use and Abuse of Battey's and of Tait's Operations," before the Boston Society for Medical Improvement, which appears in a late number of the *Boston Medical and Surgical Journal.* He narrated four cases, in one of which he removed the ovaries for cystic disease, in another the uterine appendages for dropsy of the oviducts, while the other two, which were supposed to require Battey's operation, recovered without its being done. Of course this is too small a number to generalize from—a larger induction is needed to prove, although they may illustrate a truth.

One of Dr. Baker's conclusions is that these operations should be restricted to cases in which structural changes in the ovaries or tubes have been clearly made out, and when other suitable treatment has been unsuccessfully tried for months. He also holds that the removal of the uterine appendages may be necessary in some cases in which menstruation endangers the life or the mind of the patient, though no structural changes in these organs can be discovered. His third conclusion is that when diagnosis of cyst of the ovary is made, delay in ovariotomy increases the danger to the patient, and therefore the operation should be done at once. In regard to this point there doubtless is some difference of opinion, for it may be asked, Are we justifiable in doing an operation which may destroy a patient's life when her present health is perfect, and the cystic disease quite stationary? The final conclusion is that an exploratory incision may in some cases be warranted if it be impossible to make a diagnosis without such incision.

Dr. Baker's contribution renders some assistance towards assigning to these operations their proper

place, but a great deal more must be done before this end is accomplished.

IN one of George Eliot's letters, to be found in the third volume of Mr. Cross's biography of that gifted woman, she refers to a remark which Prof. Huxley made on those good people of London, who have pursued him with false witness in their antivivisection zeal. He declares himself to be especially vexed with the "profligate lying of virtuous women."

This stinging phrase seems not inappropriate to the hermaphrodite organizations of the same kind in this part of the world.

REVIEWS.

IN WAR TIME. By S. WEIR MITCHELL, M.D. 12mo. pp. 423. Boston: Houghton, Mifflin & Co., 1885.

IF the hard-working practitioner of medicine can ever afford to turn from the rugged and often unattractive ways of science into the pleasant paths of fiction, it is surely when the work which he selects is not only vastly entertaining in itself, but has a medical man for its hero and an eminent physician for its author. Judged from either standpoint, Dr. Mitchell's latest and most ambitious production is well adapted to excite and maintain the interest of the profession. Of the story itself, admirably conceived and well sustained throughout, we need not speak in detail, though we cannot avoid an allusion to the charming portraiture of the heroine, Mrs. Westerly, to whose graceful femininity the book owes much of its attractiveness. We know of few better pictures of the true woman—the lady—accomplished, well-bred, self-respecting, yet with a woman's follies and weaknesses delicately but clearly outlined. Meeting the attack of spiteful gossip with calm dignity or with trenchant sarcasm, but melting into warm sympathy at the woes of a friend; loving mildly and somewhat hesitatingly at first, but with increasing fervor as obstacles multiply and judgment opposes; pardoning freely a great weakness, but roused to unforgiving scorn by a lesser one which savors of dishonor, she carries with her, from first to last, a definite and charming personality, which would of itself save the book from any charge of dulness, and entitle it to a high place among those works of fiction which depend for their interest rather upon skilful delineation of character than upon plot or incident.

We have been, however, no less impressed with the portrait of the hero, and, through him, with the medical aspects of the story. Dr. Wendell, at the opening of the narrative, an assistant-surgeon in the U. S. Volunteers, is portrayed with such a vigorous, yet delicate touch, and his character, combining decided mental activity and fair literary and scientific ability with a fatal vacillation, and lack of persistent energy, is so logically and dramatically developed to its legitimate conclusions, both personal and professional, as to present a picture which, though the reverse of pleasing, is most artistic and impressive. Dr. Wendell will take his place at once, as by no means the least, among the noted medical personages of fiction, of whom there are few enough bearing any resemblance to the actual type which they are supposed to represent. Indeed, exclusive of Lydgate in "Middlemarch," and Dr. Leslie in Miss Jewett's delightful little story "A Country Doctor," they are almost invariably specimens of pseudo-scientific charlatanism, as Charles Reade's Dr. Sampson; of incredible and mysterious acumen, as Wilkie Collins' Mr. Speedwell; or of ridiculous impossibilities, as Miss Phelps' Doctor Zay. It is a great pleasure to welcome to our shelves a *real* doctor, even although he is only to serve as a warning or a rebuke.

The methods by which the gradual evolution of this character is shown, are admirable in their fidelity to truth; and the successive steps by which the almost excusable procrastination and equivocation, and the slovenly, though intelligent, professional work depicted in the first chapter, degenerate into the falsehood, the criminal carelessness, and the final dishonor of the closing scenes, constitute an inflexibly logical sequence which maintains the reader's unflagging attention. The interest, too, is sustained by the fact that, up to the point when Wendell's past cowardice when under fire is disclosed, one involuntarily hopes that the amiable and lovable side of his nature will finally triumph, and that our unavoidable sympathy will be permitted to develop into affection and respect; or that the *descensus Averni* will at least take an upward turn, and lead him to quarters more comfortable, even though undeserved, than those he seems destined for. After that disclosure, however, the correlation between his physical and moral weakness is so apparent, and the downward progress is so rapid, that we no longer hope against hope, but follow absorbedly, if not resignedly, the closing events of his career. Apart altogether from the interest of the story, however, which is greatly added to by the skilful delineation of several minor characters, notably Ann Wendell, Edward Morton, and Colonel Fox, the book is full of descriptive or reflective paragraphs, originating in the author's professional experience, and appealing strongly by their vividness and accuracy to the medical reader. Have we anywhere in so few words as graphic a picture of a death-bed as this?

"Charles Gray was lost even now to the world of loves and hates. Gaunt with past suffering, his cheeks flushed with moving spaces of intense purplish red, he lay on his back. His eyes, wide open, stared up at the ceiling between moveless lids, while the irregularly heaving chest and the dilating nostrils told of the closing struggle for the breath which is life."

Or as a corollary to that scene, and apropos of the consultation between Dr. Wendell and his superior, Dr. Lagrange, to which it gave rise, could we have a more terse and truthful explanation of what often seems to the laity medical heartlessness?

"The contrasts in a doctor's life are always striking. . . . These two men, coming from the every-day calamity of a death-bed, instantly set aside the emotions and impressions, which no repetition ever quite destroys for the most callous doctor, and began to discuss the scientific aspects of the disease with which they had been so vainly battling. They both felt, more or less, the sense of defeat which waits for the physician as he leaves the room of the dying—a keener discomfort than the unthinking public can well imagine; but both were able to lose it in their interest in that which caused it."

In an admirable description of the evolution of our medical service during the war the following paragraphs are worthy of special note:

"In all other lands medicine had places of trust, and even of power, in some way related to government; but with us, save when some unfortunate physician was abruptly called into public notice by a judicial trial, and shared for a time with ward politicians the temperate color of newspaper statements, he lived unnoted by the great public, and for all the larger uses he should have had for the Commonwealth quite unemployed. The war changed the relation of the profession to the State and to the national life, and hardly less remarkably altered its standard of what it should and must demand of itself in the future. Our great struggle found it, as a calling, with little of the national regard. It found it more or less humble, with reason enough to be so. It left it with a pride, justified by conduct, which blazoned its scutcheon with endless sacrifices and great intellectual achievements, as well as with a professional conscience, educated by the patient performance of every varied form of duty which the multiplied calls of a hard-pressed country could make upon its mental and moral life."

The temptation to quote increases as we turn over the leaves, but we must content ourselves with these extracts, which might be multiplied largely, but which will serve to demonstrate that Dr. Mitchell, in producing a work that may fairly be said to show a high order of imaginative and literary skill, has preserved his character as a thoughtful and keenly observant physician, and has thus enabled his medical readers to derive an increased pleasure from his skilful blending of fact with fancy.

SOCIETY PROCEEDINGS.

PHILADELPHIA NEUROLGICAL SOCIETY.

Stated Meeting January 26, 1885.

THE PRESIDENT, S. WEIR MITCHELL, M.D., IN THE CHAIR.

DR. H. C. WOOD presented to the Society

THE FEET OF AN ATAXIC PATIENT ILLUSTRATING CHARCOT'S JOINTS.

The specimens were from the Mütter Museum of the College of Physicians, the feet of an ataxic patient that had been under his care at the University Hospital. He expressed the opinion that there was a close relation between this disease of the bones in ataxic cases and syphilis.

DR. A. SYDNEY ROBERTS read, by request, a paper on

THE SPINAL ARTHROPATHIES.

(See THE MEDICAL NEWS for February 14th, page 175.)

DR. MORRIS J. LEWIS reported

A CASE OF LOCOMOTOR ATAXIA WITH LOSS OF TEETH AND ALVEOLAR PROCESSES.

The following anomalous case of locomotor ataxia has been under my care for three months in the Episcopal Hospital. He is now under the care of Dr. Henry M. Fisher, who courteously allows me to use the notes of the case.

Mr. A., æt. 45, a well-marked ataxic for over five years, presents the following history, some points of which seem well worthy of record. Nasal catarrh exists in several members of the family, including himself. During the war he was wounded in the hip and ankle, slightly; the wounds healed kindly. He was confined for some time in Libby and Belle Isle Prisons, and since then has never felt strong. He denies having had syphilis. When 39 years of age he began to show the first symptoms of ataxia; these were diplopia, dizziness, and a staggering gait. One and a half years later he began to have lancinating pains in the extremities, and later in the bowels. Five years ago he began to have transient attacks of difficulty of hearing, and this has increased since then until about one year ago, when he became absolutely deaf.

He has always been constipated, and one year ago had slight difficulty in urination. Within the last seven months he has had severe gastric crises. Eyesight good until the last seven or eight months, except during the first year. Four years ago the symptom for which I present the case to-night, first appeared. This was a loosening and a subsequent falling out of the lower wisdom teeth. No pain nor discomfort preceded this, and the teeth were perfectly sound. In fact he had an uncommonly fine set of teeth. After this his teeth gave him no trouble until about seven months ago, when the same change began in the upper jaw, causing the loss of every tooth except the right first molar, which still remains firm.

The sequence of these events appears to be as follows: First, the teeth loosen, then the gums recede, showing in places the alveolar processes denuded, the teeth then fall or are pulled out by the fingers, and finally the alveolar processes separate in small fragments, with slight suppuration, or are detached in larger pieces. The gum then heals. The largest piece of bone thus separated shows the sockets of three incisor teeth, and a portion of a fourth. The teeth show no absorption of their fangs, and are almost without exception perfectly sound. About four months elapse between the loosening of a tooth and the final healing of the gum.

Other points of interest in this case are as follows: the patient is extremely pallid; he has the ataxic gait, although this is not very pronounced. He cannot stand with eyes closed. The knee-jerk is absent, and has been for at least four years. There is no anæsthesia of the feet or legs, and the patient localizes touch fairly; there is, however, some analgesia. There is no retardation of sensation. Examination shows external strabismus of both eyes. Pupils pin-point for near accommodation, and relax for distant vision; no reaction to light. Ophthalmoscopic examination shows left eye-ground normal, and but slight atrophy of nasal border of right disk. His sense of smell and of taste is good. There are no lesions in any of his joints to be detected.

DR. LAMBERT OTT presented a case of

LOCOMOTOR ATAXIA WITH CHARCOT'S JOINTS.

S. H., aged 45 years, a travelling salesman. In 1866 he contracted chancre, no secondary symptoms following. In May, 1881, his present disease began with shooting pains in limbs and unsteadiness of gait. In November, 1883, I first saw him and diagnosticated his condition as locomotor ataxia. At the present time there is very little missing that goes to make up the

symptom-group of this disease. In December, 1883, about two and a half years after the beginning of his trouble, he noticed a swelling of his left ankle. In the morning it seemed less, and in the evening it had increased to such an extent as to cause difficulty in taking off his boot. He had no pain, no impediment in using the joint, and had it not been for the swelling he would not have taken any notice of it. He thinks the swelling reached its maximum in two weeks, and there has been no great variation since, except that in the evening it is slightly increased. At present his foot is moved normally, but when the back of the leg is grasped and extreme flexion made, crepitation is imparted to the hand; the swelling is confined to the inner and dorsal surfaces of the ankle-joint, and feels bony. The joint measures in circumference one and a half inches, the leg at midcalf one-half inch more than the opposite limb. There is no pain or tenderness on pressure or rough usage. He has been under treatment fourteen months, and has taken corrosive sublimate and chloride of gold and sodium. The electrical treatment at first was central galvanization and general faradization, and latterly the metallic brush, with the rapidly interrupted faradic current, with marked improvement.

DR. W. W. KEEN then read a note on the

COMPARATIVE EFFECTS OF ACTIVE VOLUNTARY EXERCISE AND OF PASSIVE EXERCISE BY MASSAGE, ON THE PRODUCTION OF ALBUMINURIA,

in which he called attention to one point of value in the use of massage, heretofore unrecognized.

A patient consulted him for relief from severe, constant, and long-continued pains in the calves of his legs. During the preceding year, he had walked, as a matter of exercise, nearly 2000 miles, and during the year before that had travelled around the world, making long rides and walks a marked feature of his trip. He found that he had an albuminuria, of from three to ten or fifteen per cent., which was curiously dependent upon exercise. This he tested in the following way: He put him in bed for three days, and examined specimens of urine passed at different times in the twenty-four hours. No albumen appeared. Immediately after the last examination, he dressed and walked a measured mile. Immediately on returning, he passed water which had about five per cent. of albumen. One hour later, it had still a trace; two hours after the walk, it was free. The next morning's urine was still free, but that passed after walking a mile had again about five per cent. of albumen. A few days later, massage was applied thoroughly for forty to fifty minutes by a most competent rubber. The urine immediately before and immediately after the massage was free from albumen.

This is a striking addition to Dr. Weir Mitchell's observations as to the resulting tissue-changes induced by massage, and especially shows its value as a means of passive exercise without deleterious effects through nervous exhaustion. Dr. Keen believed the value of the massage to lie in the resulting stimulation to the muscular tissue, and the promotion of its nutrition without such changes of blood pressure and vaso-motor tonus in the muscular coat of the vessels, as induced the curious albuminuria after voluntary exercise above noted. The very probable nervous origin of albuminuria, as shown by its frequency in cases of long-continued nervous strain, and by the researches of DaCosta and Longstreth, would seem, also, to have a new confirmation by this observation.

Dr. Keen's attention has been called by Dr. Mitchell to an article on "Albuminuria as a Symptom," by the late Dr. Calvin Ellis, in the *Boston Medical and Surgical Journal*, 1880, vol. xxv. p. 388. The following somewhat analogous cases are referred to by him: In one case (Dukes: "The Albuminuria of Adolescents," *British Medical Journal*, Nov. 30, 1878, p. 794), a young man's urine was normal when in bed. On rising and taking milk only, it would continue so; but after eating a piece of bread, the albumen would appear. As he improved while lying in bed, meat could be eaten without any change in the urine. While this would look to digestive changes as a cause, the so-called post-cibal albuminuria, the following cases are more positive evidences of the effects of exertion in the production of albuminuria:

Edlefsen (*Berl. klin. Wochen.*, Sept. 22, 1879) noticed in three healthy but anæmic men transient albuminuria after exertion. Leube (*Virchow's Archiv*, v. 72, p. 145) examined the urine of a large number of healthy soldiers in the morning, and found it normal, but after a five hours' march or severe exercise, in June, July, and August, with a temperature of 54° to 77° F., it contained albuminuria in sixteen per cent., though the amount was small and never exceeded one per cent., and there were neither casts nor blood corpuscles. This could not be detected at a later examination, between 4 and 6 P.M. The same was seen under similar circumstances in army officers in connection with scanty urine, and also in nervous persons. (Fürbinger, *Zeitsch. f. klin. Med.*, 1, p. 345.) "It is most natural to suppose that its presence was owing either to some variation in the blood pressure or to some change in the vessels. The rapidity of its appearance and disappearance makes it extremely improbable that there was any change in the vessels, and we are left with a variation of the blood pressure. The view that the last might be operative seems to be supported by the statement of Ranke, that the blood accumulates in the muscles of a healthy man during exertion, while it is diminished in the organs which are at rest."

Dr. Keen stated that in the case he reported, in the course of a year the albumen has become constant, though his exercise has been restricted to the last degree consistent with health; but the amount is never over a faint trace. At no time have any casts or blood been discovered. A prolonged sea voyage is now being tried as a means of cure.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, January 27, 1885.

THE PRESIDENT, R. F. WEIR, M.D., IN THE CHAIR.

REMOVAL OF THE UTERUS AND ITS ANNEXA BY ABDOMINAL SECTION; DEATH ON THE SIXTH DAY FROM PERITONITIS EXCITED BY THE PRESENCE OF A SPONGE.

DR. BRIDDON presented a specimen accompanied with the following history: N., aged 27, came under my observation for the first time on the first day of

November, 1884, when I was furnished with the following history: She was delivered of her first and only child three years ago. She suffered on that occasion from post-partum hemorrhage, and was informed by her physician that she had a tumor. Eighteen months subsequently she began to suffer from menorrhagia and metrorrhagia, which conditions increased so much that on several occasions there was great difficulty in controlling the flow. In July, 1884, she began to suffer from pain associated with the discharge of large clots. In October, she became so much exhausted that she had to take to her bed, where I found her. She was a tolerably well-nourished, but much exsanguinated, woman. An examination of her lungs, heart, and urine had yielded negative results. Inspection detected nothing but a very moderate prominence in the hypogastric region. Palpation discovered a tumor in the median line, which had the configuration of the uterus, and which reached to about the level of the umbilicus. Auscultation could detect no pulsation of the fœtal heart. Examination by the vagina found the os patulous, the cervix shortened, and the finger came in contact with a tumor apparently projecting into the cavity of the uterus. Bimanual examination made out that the vagina was continuous with the tumor above the pubes. The diagnosis of submucous fibroma was made. It was advised to use hypodermic injections of ergotin three times a week until the local conditions were favorable for enucleation.

Nov. 20.—She had an attack of hemorrhage of a very alarming character, which only yielded to the liberal use of ergot and the tampon. The condition of acute anæmia that followed this was of a very serious character. Intense thirst, vomiting, restlessness, sighing respiration. At one time preparations were made for the intravenous use of salines. Nothing was retained but iced champagne, which was given continuously, and it was only by the most assiduous care of her attendants that she was tided over. Then it was determined, by the liberal use of such food and wine as she could assimilate, to prepare her for such operative procedure as might be necessary to prevent another hemorrhage.

Jan. 1, 1885.—Her condition appeared to warrant a more thorough examination. A large tupelo tent was introduced into the cervix, and in twenty-four hours she was etherized. A finger introduced into the cavity of the uterus detected a pretty large tumor, which was continuous with the wall of the cavity. When the hand was introduced into the vagina, two fingers could be passed through the cervix, and directly up to the left cornua; and when these two fingers distended the cavity of the uterus, no tumor could be felt within. But bimanual examination proved that the tumor occupied the right side of the uterus and the corresponding broad ligament, and it was determined to remove the tumor by the abdominal section as soon as her condition appeared to warrant it. She was put upon a nutritious diet, and a liberal use of Burgundy.

After the end of the first week in January, the patient's condition appeared to warrant the contemplated interference. She was prepared by the usual aperient and thorough personal disinfection. The room in which it was proposed to do the operation was properly prepared, instruments, with a single exception, were boiled, brushed, and soaked in carbolic acid solution. Sponges, round and flat, were prepared a week before. Hypodermic of morphia and atropia was administered at 2.30 January 10th, and the patient was placed under the influence of ether.

An incision was made in the median line from below the umbilicus to just above the pubes. After the arrest of hemorrhage from a few bleeding points, the peritoneum was opened and the tumor exposed. It was found to involve the right side of the uterus, passing into the corresponding ligament. There was also found a small cyst in the ligament, and unconnected with the uterine tumor, and a cyst as large as a lemon in the left ovary. The tumor was held down in the pelvis so firmly that it was found impossible to lift it out until after ligation and separation of the broad ligaments. This division was made well outside the tubes and ovaries. Even after this liberation, it was found difficult to bring the supravaginal portion of the cervix into the view. A stout cod line was then passed round the tumor, and tightened by an écraseur, so as to compress the cervix temporarily, preparatory to the application of an elastic ligature, which was passed twice round and clamped. The cod line was then removed, and the section of the tumor was absolutely bloodless. It was intended to transfix the pedicle above the ligature with some gilt steel acupressure needles, but they were not deemed sufficiently strong, and a trocar was used. This was the exception referred to in the statement that all the instruments had been scrupulously cleaned. The trocar was clean, and was in the carbolic solution, but it had not been as thoroughly treated as the others. There was nothing to clean out of the peritoneum save a little blood from stitch-holes, and that was absorbed by a flat sponge. The abdominal walls were brought together by silk sutures. There was some little difficulty in placing the stump outside of the walls. It was well dusted with iodoform, and twelve layers of fifty per cent. iodoform gauze were used in the dressing, supplemented by a quilt of bichloride jute.

The tumor weighed three pounds. It was of a soft, succulent character—so soft, indeed, as to convey the impression that it was fluctuant, probably of the myxomatous variety. A subsequent examination made out that it was a soft fibroma.

On the day following the operation, the condition of the patient was satisfactory. Her pulse was frequent, and her temperature was 103°, but her general appearance was good, She complained of some pain due to the traction of the stump. She was given opium in moderate doses in the form of enemata, and a refrigerating coil was applied to the abdomen. On the second day, her temperature was 102°. The vomiting had ceased. On the third day, the temperature was down to 101°, and everything seemed hopeful. On the fourth day, there was a very unfavorable change; her temperature went up to 104°. I made a very careful examination, and could find no cause. When I was informed of the change in her condition, I took a glass drainage-tube with me, supposing that there must be something confined within the cavity of the peritoneum that required an outlet. On removal of the dressing, there was absolutely no evidence of anything that would warrant interference. There was no abdominal distention and no tenderness, and I supposed the symptoms must be due to blood poisoning. She was given stimu-

lants, hypodermics of morphia, and the refrigeration was kept up. But it was all in vain; the temperature came down a degree, but the heart failed rapidly, and she died on the morning of the sixth day.

The following is the report of Dr. William Henry Porter, who made the autopsy twelve hours after death:

"The external abdominal wound was the only surface abnormality. The abdomen was opened by straight and elliptical incisions, so that the wound and attached stump were removed entire. The incision to the right of the wound bisected a small pocket of pus, which communicated with the operation wound by one of the stitch-holes.

"Thoracic cavity: Heart and lungs normal, excepting a little fatty change in the former.

"Abdominal cavity: No distention of abdomen or undue accumulation of gas in intestines. No general peritonitis. Spleen firm and dark in color. Kidneys: both glands larger than normal. They are anæmic. Capsules normal and non-adherent. Underlying renal surface smooth. Cut surface granular. Cortex thickened. Microscopic examination: The epithelial cells, both of the straight and convoluted tubules, showed the protoplasm to be in a state of fine granular metamorphosis. This had caused the cells to become swollen, and in many places the lumen was nearly closed by them. At other points, the cells were becoming detached, the intertubular tissue was swollen and œdematous. The lesion is that of an acute parenchymatous metamorphosis of the renal cells, one which develops during the last few days or hours of life, and is often found at the necropsy.

"When the intestines were detached from the mesentery, at a point thirteen feet below the stomach, a collection of pus was found located in the substance of the mesentery, and bound to the intestinal wall by fibroplastic inflammatory exudation. From this point down to the cæcum, the small intestine and a part of the colon were in the pelvic cavity, and more or less glued together by inflammatory exudation. The recto-vaginal pouch was covered by a layer of recent deposit and a very small amount of pus. The stumps left by excision of the ovaries were not inflamed. The inside of the wound bore evidence that the healing process was progressing favorably. One end of the elastic ligature, external to the clamp, protruded into the peritoneal cavity, possibly pulled through during evisceration.

"In the iliac fossa near the cæcum, a sponge was found, seven centimetres in diameter. It was almost, if not entirely, encapsuled by inflammatory lymph.

"The wound and stump being in such good condition, and the pelvic inflammation being most advanced on the right side, point toward the foreign body as the cause of inflammation.

"Liver, weight, sixty ounces. It was slightly fatty. A few points resembling fat emboli, or commencing pyæmic foci, were found. The hepatic cells showed fatty infiltration and degeneration; also bile pigmentation.

"The cause of death in this case may be ascribed to the original operation, peritonitis, and an overworked pair of kidneys."

The fatal flaw in the technique of this operation was the omission to count the sponges before closing the wound. I cannot plead ignorance of the necessity for attention to so important a detail, for I was conversant with the accidents from such cause published in the literature of the subject. How it could have happened, surrounded by my trustworthy friends, men accustomed to deal with such cases, is more than I can tell.

DR. SANDS had recently heard of an instance in which a few months ago ovariotomy was performed, and one or two days after the operation unpleasant symptoms developed. It was then found that a sponge was missing; the surgeon opened the abdominal cavity, removed the sponge, the unpleasant symptoms disappeared, and the patient recovered.

DR. MARKOE referred to a case in which the accident of leaving a sponge in the bottom of a wound occurred in his observation. It was one of deep sinus of the popliteal space, which for many months had been treated by a medical gentleman by the use of sponge-tents. Finally Dr. Markoe was called upon to operate. In order to facilitate following the track of the sinus, he injected the cavity with black ink, for the purpose of staining every part of the tract, and at the operation he followed out every part of the sinus with the greatest care. The late Dr. Van Buren assisted him at the operation. No disease of the bone was found. Subsequently the case did very well, but the sinus remained as obstinate as ever, and after a time the gentleman went to Philadelphia, where he consulted one of the leading surgeons in that city, who recommended an operation, and performed it, and its performance disclosed the presence of a piece of sponge as large as the smallest commonly used, which was lodged in the cavity, and was surrounded by dense fibro-plastic material. The foreign body was removed and the patient recovered. He had the satisfaction of dividing the responsibility with the gentleman who had previously used sponge-tents as to who had left the sponge in the wound.

DR. STIMSON said there was a practical lesson to be learned from Dr. Briddon's case, as the accident was plainly the result of using a handful of small sponges for the purpose of holding back the intestines, instead of one large flat sponge.

DR. BRIDDON remarked that his directions always were to use the small sponges only during the operation of making the incision in the abdominal wall down to the peritoneum; then they should all be removed, and afterward the large flat sponge employed.

DR. HALL asked if we were justified in assuming that an aseptic sponge left in the peritoneal cavity would cause peritonitis.

DR. GERSTER wished to add two cases, not on account of the fact that sponges remained in the wound, but because he was able to say that the sponges were not forgotten, but remained in spite of the wound being carefully explored for them. The sponges which he used were Florida sponges prepared after the method of Keller, which leaves some of them exceedingly brittle.

After having removed the breast of one patient, it was necessary to enter deeply the axillary cavity, and sponges were packed into the deepest portion of the cavity during one part of the operation, and there one of them became so matted together and united with the wound surface, that when the sponge was seized to be extracted, a portion of it, about the size of the last joint of one's thumb, separated and remained behind.

The surface of this fragment was so smooth from the blood-clot enclosing it, that it was not recognized by subsequent exploration of the wound with the finger. The external wound healed by first intention throughout. Everything seemed to be doing well, and at the expiration of ten days he withdrew the drainage-tube which had been placed through a counter-opening made in the latissimus dorsi muscle. A day or so afterward, suddenly, high fever set in, without any apparent reason, but soon the nature of the disturbance was disclosed, for a fluctuating swelling with redness of the skin developed in the axillary region, and a large quantity of pus was evacuated, when the piece of sponge was discovered and removed.

A similar instance occurred to him in a case of extirpation of the rectum, in which a portion of a sponge remained in the deepest part of the wound beyond the pelvic fascia. It resulted in the formation of abscesses in the prevertebral connective tissue, and the case terminated fatally by septicæmia.

The PRESIDENT remarked, that it seemed, in Dr. Gerster's first case, the sponge did no damage until it was exposed by the removal of the antiseptic dressing.

DR. GERSTER remarked that he would be rather inclined to believe that there were septic substances in the sponge which produced the trouble, although there was no suppuration before the dressings were removed. There was a case on record which he remembered to have read some years ago, reported by Volkmann, who once performed exsection of the hip-joint and left a sponge in the acetabulum, which remained for a long time, causing no trouble whatever, but finally trouble was developed, and it was removed by operation four or six weeks after the performance of the exsection.

DR. BRIDDON referred to the fact that this accident had occurred in one of Tait's own cases, and that Tait referred to ten others in which it had occurred.

THE PRESIDENT also remarked that a paper had recently been published in which twenty cases of the occurrence of this accident had been reported.

EPITHELIOMA OF THE PENIS.

DR. BRIDDON presented a patient, a man forty years of age, who submitted to amputation of the penis by one of his colleagues in the Presbyterian Hospital, in August, 1884. The operation was performed a short distance behind the glans. In October following, the patient entered Dr. Briddon's service at the hospital, and on examination it was found that there was a return of the disease in the stump, with induration of some of the inguinal glands. Dr. Briddon amputated the penis according to the plan devised by Demarquay, by making two elliptical incisions, circumscribing the penis at the root, and terminating in the perineum just in front of the penis. The perineal portion of the spongy urethra was then dissected from the corpora cavernosa, turned down, and stitched to the margin of the perineal wound about one inch in front of the anus. The penis was then drawn forward, and dissected from the pubis by hugging the front of the bone closely with the knife, cutting off the crura from the ramus on either side. Dr. Briddon suggested that this step in the operation would be improved by hugging the crura of the penis with the knife as they join to form the covering of the body, and in that way a greater length of bloodvessels would be insured outside of the triangular ligament. The indurated inguinal glands were removed at the same operation. Union was retarded by faulty drainage. There was already evidence of return of the disease in the stitch-holes in the inguinal region, and possibly just above the scrotum, but whether the induration above the scrotum depended upon a return of the disease, or whether it was due to the induration surrounding the sinus, which existed for some time, he was not prepared to say, although it was probably due to the former. The patient experienced no difficulty in passing his urine, although he was obliged to take a sitting position when he emptied his bladder.

DR. W. T. BULL referred to a case which he reported to the Society about one year ago, in which precisely the same operation had been performed, and although the inguinal glands were enlarged upon both sides, and were indurated, they disappeared altogether very soon after the operation. Already one year and a half had elapsed since the operation, and there had been no recurrence of the disease.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, February 6, 1885.

PROF. THOMAS G. RODDICK, M.D., IN THE CHAIR.

THE CHAIRMAN related the following case of

SUBPERIOSTEAL AMPUTATION AT THE HIP-JOINT,

and exhibited the specimen.

I. McL., aged 35, five years ago received a severe injury of the hip-joint by falling through a trap-door and being suspended by his right foot, which caught as he fell. The joint, after the accident, was much swollen and very painful, and patient was confined to bed for a month. He then got about with some difficulty, the joint being still swollen and painful. During the next four years, he was sometimes better and sometimes worse, but never able to use the joint perfectly, as it was always stiff and somewhat painful. A year ago he consulted Dr. Roddick, who treated him by extension and rest, under which he rapidly improved, and was soon able to go home with his hip-joint fixed in an apparatus devised by Dr. Roddick. For several months, patient progressed favorably, and was entirely free from pain. The joint, however, again became painful, inflamed, and swollen, and an abscess opened in front of thigh to the inner side of Scarpa's triangle. He again came into town and saw Dr. Roddick, who made free incisions on the outer side of the thigh, draining the abscess as thoroughly as possible. The patient did not improve, but had nightly elevation of temperature with profuse suppuration. The joint was now quite rough on manipulation, and apparently entirely disorganized. It was found impossible to drain the abscess cavity thoroughly, and the pus began to burrow deeply along the muscles. The patient's temperature kept continuously high (103–4°), and he had one severe rigor. His general condition was unfavorable. He now consented to operative procedures. Dr. Roddick decided to perform excision if possible, and if not, to proceed to amputate at the hip after the method of Furneux Jordan.

He was placed under ether on February 3, 1885, and an exploratory incision made on the outside of the thigh over the trochanter major. It was now found that not only the head of the thigh-bone and acetabulum were diseased, but the upper third of the bone was bare and necrosed, and that pus had burrowed in all directions. It was thought that excision would be of no benefit, owing to the great extent of the disease and the condition of the patient; so it was determined to amputate at the hip-joint. An Esmarch bandage having been applied high up, the thigh was amputated by the circular method at the junction of the middle with the upper third, and then, after the vessels had been secured, the upper end of the femur in the stump dissected out by an incision on the outer side, as recommended by Mr. Furneux Jordan. By this operation the vessels were divided low down and secured without difficulty and with almost no loss of blood. After resecting the femur, several large pieces of necrosed bone were removed from the acetabulum.

Notwithstanding the little loss of blood, the shock was very severe, and, although the patient rallied slightly after the operation, he sank within twenty-four hours in spite of all treatment. Dr. Roddick said that, in addition to performing Jordan's operation, he peeled off all the periosteum from the upper part of the thigh-bone before removing it. The specimen which was exhibited to the Society showed almost complete absorption of the head of the femur, with necrosis of the upper part of the bone. Several large sequestra which had been removed from the acetabulum were also shown.

TUMOR OF THE BLADDER.[1]

DR. RODDICK stated that the case of removal of a large tumor of the bladder some three months ago, and which he had reported to the Society, had lately died. The man was doing well, and the wound had almost closed, when his health began to fail, and pus appeared in large quantities in his urine. Then a large scrotal abscess formed, and weakened him a great deal, and he gradually sank and died from exhaustion. The bladder, kidneys, and ureters were shown. The point of attachment of the tumor was seen a little to the left of the neck, and at the point where the pedicle had been attached was seen a small nodule healed over. The bladder itself was hypertrophied, and exhibited all appearances of obstructive disease. The ureters were much dilated, and both the kidneys were affected with suppurative interstitial nephritis.

CANCER OF PYLORIC END OF STOMACH AND PANCREAS.

PROF. GEORGE ROSS reported a case of malignant disease of the pyloric end of the stomach with secondary disease of the pancreas, and exhibited the specimens. The history of the case was as follows:

Dr. Ross saw the patient, a man, aged 40, a year ago. At that time he complained of dyspeptic symptoms, such as acidity, flatulence, etc., and failing health. He improved under treatment; but when seen some months later, he complained of vomiting at intervals of considerable length—one, two, and three days. Vomiting was preceded by great uneasiness, and a sense of distention. The vomiting, as a rule, was a voluntary effort, and gave great relief. On examination, the patient now presented all the symptoms of a dilated stomach, and the diagnosis was disease of the pyloric end, with dilatation of the stomach. No tumor could be felt, nor was there any pain. Some time after, he entered the hospital to be treated by siphon and douche, and then no dilatation could be made out, and the vomiting had almost entirely ceased; very occasionally, however, he vomited frothy matter which contained abundance of sarcinæ ventriculi. During the summer he improved somewhat, and was able to get about. In the autumn his health began to fail rapidly, but there was no pain or vomiting. In October last, he began to exhibit a slight yellowish tinge of skin; the color deepened gradually, and emaciation steadily increased. A month later, an indistinct fulness was felt about the pylorus, but this could not be accurately defined. Diagnosis was malignant disease of the pylorus, with pressure on the bile-duct. He gradually became weaker, and died of exhaustion a month ago. Throughout the whole course of his illness, he never suffered in the slighest degree from pain. At the autopsy, the stomach was found but slightly dilated, the pylorus was found to be the subject of malignant disease, and the pyloric orifice was much contracted, and admitted with difficulty an ordinary lead-pencil. There was also secondary disease of the head of the pancreas, with almost complete obliteration of the common bile-duct.

[1] See THE MEDICAL NEWS, Jan. 3, 1885.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, February 5, 1885.

THE PRESIDENT, B. F. BAER, M.D., IN THE CHAIR.

CERVICAL PREGNANCY.

DR. E. E. MONTGOMERY read a paper in which he recounted the history of a case seen by him in consultation with Dr. Alexander. The patient had been pregnant eight times; the last labor had been terminated by forceps. The present pregnancy had lasted three months, when she was taken with severe pain and quite profuse hemorrhage. An examination under ether disclosed that the cervix was distended, forming a globular tumor. The os, turned backward, was filled up with a tense membrane; breaking through it, the cervix was found to be a large cavity, in which was the fœtus and its envelopes. The body of the uterus appeared like an excrescence upon the distended cervix; it would admit a finger, and was lined by a decidua. The membrane below was continuous with the outer mucous membrane of the cervix, so that the remains of it hung as a fringe from the os.

This case differed from the few cases of this condition described, in that there was no contraction of the os; in the majority of cases it occurs in primiparæ, and when discovered it was necessary to proceed to artificial measures to make an opening.

DR. GOODELL remarked that he had no knowledge of cervical pregnancy. One case which had been sent to him as such was epithelial cancer of the cervix. How could such a case be diagnosticated without a post-mortem examination? Dr. Montgomery's hypothesis of an arrested abortion is probably the correct solution of such a case as he has described. The fœtus might be forced out of the body of the uterus and arrested in the cervix by an unyielding os, or by cica-

tricial bands. Some years ago, a physician of this city who had a large obstetrical practice, borrowed Dr. Goodell's écraseur for the removal of a supposed uterine polypus, which proved to be a fœtus in its amniotic sac. Dr. Goodell had never been able to understand how an experienced man could make such a mistake, but the description of this case of cervical pregnancy has thrown light upon the matter. Dr. Montgomery's description of the distended cervix would apply very well to uterine polypus with a long pedicle, and a mistake in diagnosis might easily be made.

DR. MONTGOMERY questions the primary occurrence of cervical pregnancy. He believes the fœtus has originally taken its seat in the body of the uterus, and has been forced into its lower position later; but it might be primary, the internal os being patulous, the same conditions that sometimes cause placenta prævia might cause the entire fecundated ovum to be arrested in the cervix.

RUPTURED UTERUS.

D. B. F. BAER presented the specimens and related the history. Mrs. F., colored, 32 years of age, married ten years, had borne four children at term, and had one miscarriage. The first child was forceps-delivered, and was still-born. November 14, 1884, she was taken in labor. A midwife was in attendance, who pronounced everything correct. After a few hours of severe pains, the patient "felt something break in the womb," and labor ceased, but was replaced with sharp pains all over the abdomen; blood escaped in great quantity from the vagina. Collapse ensued, and she was thought to be dead; a slow reaction occurred, and her attendants waited for labor to begin again. Dr. Fisher was called to see her ten days after the accident. He found her abdomen tender and tympanitic. a mass like the head of a fœtus in the right hypochondriac region. The pelvis was empty. Temperature 103°; pulse 108, and small. Rupture of the uterus, and escape of the fœtus into the abdominal cavity was diagnosticated. Dr. Baer was called in and confirmed the diagnosis. The patient refused operative assistance, and preferred to die in peace, but five days later asked to be relieved. Preparations were made for laparotomy. An examination per vaginam revealed gangrenous pus escaping freely, and the placenta loose and hanging from the vagina. The hand passed readily through the os uteri and through a tear in the right wall of the cervix into the abdominal cavity and came upon the trunk of the child. The latter was extracted through the vagina by version by the feet; it was putrid. The parts were all irrigated with carbolized water, and the hand again introduced entered an adventitious sac and nowhere came in contact with intestines or other viscera. The uterus was well contracted and quite small. The uterus and sac were washed out with carbolized water until it returned pure. The patient died of septicæmia ten days after the removal of the fœtus. Dr. Baer is in full accord with the principles advanced by Dr. R. P. Harris in his paper entitled, "If a woman has ruptured her uterus during labor, what shall be done to save her life?" (*Amer. Journ. Obstet.*, October, 1880, p. 809), in which he advises that the abdomen should be opened and the peritoneal cavity thoroughly cleaned. In this case, however, nature had protected herself by forming an adventitious cavity, and there could be no reason to open the abdomen to clean this out, as it could be reached from below more directly and without injury to the soft parts.

DR. HENRY M. FISHER said that in Germany a distinction is made between lymphatic septicæmia and phlebitic septicæmia. In the first form the poison is absorbed by the lymphatics and inflammation of serous surfaces with exudation is the consequence. In the phlebitic form, numerous emboli are formed and hectic fever and local pus formations, the result of these emboli, are found. At the autopsy, in this case, pleural and pericardial effusion was found. It will be remembered that peritonitis occurred very soon after the rupture.

DR. GOODELL remarked that he had come intending to criticise Dr. Baer's treatment of this case for not resorting to laparotomy. But he found himself agreeing with both Dr. Harris and Dr. Baer. In recent cases laparotomy should always be performed, but in fifteen days an adventitious sac had been formed, and the dangers to the patient would have been increased by operation. He had seen two cases of rupture of the uterus, both of them occurred in the practice of a physician who never used obstetric forceps and had to send four miles for a consultant. In the first case peritonitis rapidly supervened, the abdomen became very much enlarged and the fœtus could not be located by palpation. The abdomen was not opened. After long groping the fœtus was found close under the diaphragm. He had great difficulty in extracting it, as the loops of intestines became entangled between its legs: the placenta was also found in the abdomen. In the other case, the body of the fœtus had escaped into the abdomen, but the head was still in the uterine cavity; it was delivered by forceps. Both patients died. In both cases it would have been far better to have opened the abdomen. *Amer. Journ. Obst.*, vol. x. p. 478, 1877.

DR. HARRIS was in accord with Drs. Goodell and Baer as to the proper treatment of the case reported. It was too late to do anything when the physician was called. The general opinion is coming around to coincide with his way of thinking concerning the propriety of laparotomy in all cases as soon as reaction from the shock of rupture and hemorrhage has been established. Of the cases reported, after such treatment, 50 per cent. have recovered. One woman has been reported as having ruptured her uterus in four successive labors with delivery per vaginam and without laparotomy, and she survived it all, but such a case is phenomenal. Three cases in Europe have been treated by removal of the uterus as in the Porro operation; they all died; there seemed to be no reason for such a method. In most cases the split extends through the cervix, and thus free drainage from the abdominal cavity is secured. One reason for closing the cervical rent by sutures is to avoid the danger of cancerous growths to which that lesion is supposed to give rise.

DR. LONGAKER remarked that many of these cases died from the profound shock and hemorrhage immediately following the accident. Two cases in his experience had died within two hours, one of them undelivered.

DR. BAER was glad to hear Dr. Harris make the distinction as to the propriety of laparotomy in his case,

where the patient was not seen until fifteen days after the accident, and was suffering from septicæmia. He had intended to perform laparotomy and was prepared for it, but when he found the newly developed sac he changed his plan, as he thought nothing could be gained by it.

NEWS ITEMS.

MONTREAL.

(From our Special Correspondent.)

PREPARATIONS AGAINST AN INVASION OF CHOLERA.—A special meeting of the Montreal Medico-Chirurgical Society was held February 13, 1885, to discuss the means necessary to prevent the importation and spread of contagious diseases, especially cholera. There were present at the meeting representatives of the Board of Health, School Commissioners, and members of the French Medical Society. Dr. Larocque, the Health Officer, opened the discussion with a short paper.

A new health bill was advocated similar to that which at present exists in Ontario. It was also suggested that district physicians be appointed, and that all contagious diseases be reported to the Board of Health.

The abolition of yard privy vaults was recommended, as it was said there were 10,000 in the city, of which only 1500 were yearly emptied. It was also suggested that night soil should be burnt. More sanitary police were needed to carry out sytematic inspection of houses and premises in order that the city should be properly cleansed before summer in order to be prepared for cholera. The sewers were advised to be flushed at intervals; and, in conclusion, a more efficient ambulance service was demanded.

THE ARMY MEDICAL LIBRARY AND MUSEUM BUILDING.—A bill appropriating $200,000 for the erection of a fire-proof building for the accommodation of the valuable collections of the Army Medical Museum and Library passed the House last Monday. This action insures the final passage of a bill at this Session which will enable the building to be completed by the time of meeting of the International Medical Congress, in 1887.

THE SOUTHERN BRANCH OF THE NEW YORK STATE MEDICAL ASSOCIATION will hold a meeting in Brooklyn on Wednesday, February 25th, at which several valuable papers are promised.

GAILLARD'S MEDICAL JOURNAL.—We are informed that this periodical will pass under the editorial management of Dr. P. Brynberg Porter, of New York.

THE CHOLERA AND THE ILLINOIS STATE BOARD OF HEALTH.—At an adjourned meeting of the Illinois State Board of Health, held February 7th, the following preamble and resolutions were adopted:

Whereas, The season is fast approaching when, it is feared, Asiatic cholera will again assume epidemic proportions in Europe and so threaten this country with a national calamity; and

Whereas, In the judgment of this Board such calamity may be averted by a system of preventive measures based upon the requirements of modern sanitary science;

Therefore be it resolved, That this Board respectfully, but urgently, requests: First, That the President of the United States convene the National Board of Health forthwith, and put at its disposal, subject to his approval, the unexpended balance of the appropriation made at the last session of Congress for a contingent epidemic fund. Second, That the Illinois Senators and Members of Congress push the prompt appropriation of the sums recommended by the House Committee on Public Health. Third, That authority be, by a joint resolution of Congress, conferred upon the President to issue a proclamation forbidding immigration from infected countries whenever, in the judgment of the National Board of Health, such immigration threatens the public health of this country.

SECOND REPORT OF THE SPECIAL CHOLERA COMMISSION IN INDIA.—The supplement to the official *Gazette of India* contains the following memorandum from Surgeon-General J. M. CUNNINGHAM, M.D., Sanitary Commissioner with the Government of India:

In continuation of my letter of the 27th ult., I have the honor to submit, for the information of the Government, the accompanying communication from Dr. Klein, and to suggest that it also may be published in the supplement to the *Gazette of India* for general information.

The fact that comma-bacilli have been found in tanks without any case of cholera having occurred among the large number of people using them, is an observation of much interest and importance in regard to the relation of comma-bacilli to cholera. The observation has a special interest and importance, moreover, from the circumstance that one of the tanks in question is the *same tank* as that in which Dr. Koch found comma-bacilli, and so hastily concluded that the outbreak of cholera which took place about that time among persons using this tank had been caused by the comma-bacilli it contained.

DR. E. KLEIN appends a report in which he refers to the situation of the bustees, and the general use made of the tanks near by for all purposes—cesspools, washing of clothes, utensils, and drinking. The fact that comma-bacilli were found in the water of a certain tank, and that only one case of cholera occurred within a month, though the water was in general use, is referred to as specially significant as relating to the question of the etiology of the disease.—*Lancet*, Jan. 31, 1885.

SIR JOSEPH LISTER.—The Emperor of Germany has just conferred on Sir Joseph Lister the "Ordre pour le Mérite" for Science and Arts. This act of the venerable Emperor is a generous recognition of the claims of British medical science. In commenting on it, the *Lancet* says: "The discoverer of vaccination has been more honored in Germany than in his own country, in accordance with the Scripture that 'cannot be broken.' The quiet revolution in surgery, involving the practical abolition of pyæmia, hospital erysipelas, and gangrene,

and an infinite diminution in the calamities of surgery, which we owe to Sir Joseph Lister, more than to any other single man, is a service to mankind not quite on the same scale as the discovery of vaccination, but of very far-reaching consequence."

THE CHAIR OF PATHOLOGY AT LEIPSIC.—PROF. BIRCH-HIRSCHFELD, of Dresden, has been nominated to the Chair of Pathological Anatomy at Leipsic, vacant by the death of the late Prof. Cohnheim. The new professor is perhaps best known for his exhaustive text-book on Pathological Anatomy, of which the second edition is now appearing. He has done much original work in bacteriological subjects. He is not, therefore, likely to pursue the physiological line of inquiry so much advanced by the late illustrious teacher.—*Lancet*, Jan. 31, 1885.

SCIENCE AT TURIN.—It has been determined to spend the very liberal sum of £120,000 in creating new scientific buildings in connection with the University of Turin. Half that sum will be provided by the Provincial and Communal Councils of the City, and the other half by the Government, with the sanction of the Italian Parliament.—*Lancet*, Jan. 31, 1885.

NOTES AND QUERIES.

CASE OF CONGENITAL AND HEREDITARY ABSENCE OF LEFT BREAST.

To the Editor of THE MEDICAL NEWS.

SIR: On the 8th of August, 1883, I delivered Florence C. of a healthy male child. During the labor, which was complicated by convulsions, the patient happening to throw her left arm over her head, I noticed that the skin in the axilla was perfectly bare and smooth, and on looking further, was surprised to find that there was an entire absence of the left breast, there being only the rudimentary nipple, as in the adult male. The right breast was perfectly developed, and there was already some secretion of milk in it. On questioning the girl a few days afterwards, she stated that her mother, who is still living, has only one breast—the right one—and that she had given birth to eight children, and had nursed and raised all of them. The grandmother had the same peculiarity. Florence is a pronounced brunette, with long black hair on scalp, and abundance of hair in right axilla and on mons veneris. She has nursed her child uninterruptedly, and it is now healthy and well developed.

CHARLES W. BADEAU, M.D.

ALLENDALE, NEW JERSEY.

PHOSPHATE OF SODA IN HEPATIC COLIC.

To the Editor of THE MEDICAL NEWS.

SIR: Apropos to the recent discussion in the New York Surgical Society, as published in your issue of January 31st, you are at liberty to publish the following notes of a case occurring in the rural districts:

Mrs. J., aged 28, was seen on the 22d of October, 1884. Found her suffering intensely, the pain being referred to the region of the gall-bladder. The patient herself was firmly of opinion that she was suffering from gall-stone, and said her sister had suffered in the same way, discharging the stones a few days after the attack. This patient further said that she had suffered with similar attacks at intervals for ten years. On the 23d of October, having relieved the suffering of the day before by morphia hypodermically, I put her upon drachm doses of the phosphate of soda three times a day. To quote her own expression, "the region of the liver felt as if it were being ground up." On the 25th, two days after, over one hundred gall-stones, varying in size from a duckshot to a large pea, were discharged per rectum. The present health of the woman is excellent, and she has had no further trouble. The phosphate of soda was continued for several weeks, but has been dispensed with now for two months. What one of the laboratory staff of the profession will give us, the *rationale* of the action of this remedy in this class of cases, and also in catarrhal jaundice, for which it sometimes seems to act as a specific?

J. B. BRISTOW, M.D.

FARMINGTON, TEXAS, Feb. 14, 1885.

DIAGNOSTIC SIGN OF PREGNANCY IN THE FIRST MONTH.

To the Editor of THE MEDICAL NEWS.

SIR: In your issue of February 7, under the heading of "A New and Certain Diagnostic Sign of Pregnancy in the First Month," you attribute the discovery to Reinl, the date of the announcement as 1884.

The writer has frequently heard Prof. Goodell refer to it in his clinic at the University, and I would respectfully call your attention to his announcement of the fact on p. 26 in *Goodell's Lessons in Gynecology*, Philadelphia, 1880. He says: "A good off-hand rule to remember (in the introduction of the uterine sound) is this: 'When the cervix is as soft as one's lips, the woman is probably pregnant. When it is as hard as the tip of one's nose, the womb is most likely empty.'" Very respectfully yours.

W. G. HOWELL, JR.

GERMANTOWN, Feb. 16, 1885.

AGAINST A STATE BOARD OF MEDICAL EXAMINERS.

At the regular monthly meeting of the Montour County (Pa.) Medical Society, held January 22, 1885, the following resolutions were unanimously adopted:

Resolved, That we consider the proposed Legislative Enactment, establishing a State Board of Medical Examiners and Licencers, in its logic, expediency, and practicability, a crab-like effort at advancement.

Resolved, That the recognition of and coöperation with an irregular school of medicine, as provided in the measure of said Act, violate the letter and spirit of the State and National Codes of Ethics, and foster and perpetuate a delusion that is justly doomed to early extinction.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 10 TO FEBRUARY 16, 1885.

ROBINSON, S. Q., *Captain and Assistant Surgeon.*—From Portland, Oregon, to his proper station, Fort Spokane, Wyoming Territory.—*S. O. 20, Department of Colorado*, Feb. 2, 1885.

KEAN, J. R., *First Lieutenant and Assistant Surgeon* (recently appointed).—Assigned to duty at Fort Sill, Indian Territory.—*S. O. 23, Department of Missouri*, Feb. 11, 1885.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE-HOSPITAL SERVICE, FOR THE WEEK ENDING FEBRUARY 14, 1885.

GUITÉRAS, JOHN, *Passed Assistant Surgeon.*—When relieved at Key West, Florida, to proceed to Charleston, S. C., and assume charge, Feb. 11, 1885.

KALLOCH, P. C., *Assistant Surgeon.*—To report to Passed Assistant Surgeon Peckham, at Wilmington, N. C., for examination for promotion, Feb. 10, 1885.

GLENNAN, A. H., *Assistant Surgeon.*—Relieved from duty at New Orleans, La., to proceed to Key West, Florida, and assume charge, Feb. 11, 1885.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*